Medicaid Participation by Pediatricians and Obstetricians

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MEDICAID PARTICIPATION

BY PEDIATRICIANS AND OBSTETRICIANS

BACKGROUND

This paper reviews some of the literature on physician participation in Medicaid, and analyzes some recent data on Medicaid expenditures for physician services across the country and in the State of California.

INTRODUCTION

The Medicare and Medicaid programs were established in 1965 and 1966, respectively, to subsidize the purchases of health care services by the aged and the poor. A "pure" financing approach was taken in these programs. No attempt was made to guarantee the direct provision of health care services through, for example, a national health service. The private market for health care services was assumed to be adequate to supply sufficient services for potential beneficiaries of the Medicare and Medicaid programs.

Because the private market is relied upon to supply physician services, beneficiaries' access to medical services is highly dependent on the willingness of providers to participate in Health Care Financing Administration (HCFA) programs. For Medicaid, a physician's participation depends on whether the physician accepts a Medicaid eligible as a patient for billing purposes. If he or she does accept the patient, this implies acceptance of the Medicaid-determined reasonable charge as payment in full. Unlike Medicare, there is no provision for a physician to "balance bill" for the dif-

ference between a Medicaid reasonable fee and the physician's usual charge to private patients.[1] The physician's alternatives when presented with a potential Medicaid patient are to provide and bill for services to be reimbursed at Medicaid rates, to provide "free" services not billed to Medicaid, or not to provide services to that patient at all. In theory, the Medicaid participation decision can be made on a claim-by-claim basis. A physician may accept all or none or only some of the Medicaid eligibles who seek service. For example, a physician might accept Medicaid only for current or former patients but not for new patients. A physician might also accept a Medicaid eligible as a patient on one occasion and not accept that patient at some later date.

Beneficiaries' access to physician services therefore depends on physician participation. For Medicaid beneficiaries, only physicians who participate in the program are viable sources of care. Further, even if many physicians participate in Medicaid, a low participation rate by a particular specialty may erode beneficiary access to specific kinds of health care services. Specifically, although many internists and general practitioners may be excellent sources of primary care services for children and pregnant women, access to experienced physicians in the specialties of pediatrics and obstetrics will be of particular importance to those patients. Further, even if many pediatricians and obstetricians do participate to some extent in Medicaid, limited participation may also imply limited patient access. A study by Sloan, et al. (1977) found that in 1975 while on average Medicaid patients accounted for 10 percent of all physicians' office visits, 5 percent

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1 In Medicare terms, in effect, Medicaid implies mandatory assignment.

of the physicians reported that more than 50 percent of their patients were Medicaid recipients, and nearly 30 percent of the physicians reported that less than 1 percent of their practices consisted of Medicaid patients.

This kind of participation pattern may, but does not necessarily, reflect a real personal and economic burden on the poor. Many beneficiaries may have to bear substantial transportation costs in getting to and from the offices of physicians who do accept a significant number of Medicaid patients. Limited access to such physicians may not only produce immediate health hardships to those patients, it may also have the unwanted effect of raising Medicaid expenditures rather than reducing them. Medicaid patients who perceive reduced access to private physician's offices may elect to use hospital outpatient departments and emergency rooms as their regular source(s) of care. In addition to being more costly to the Medicaid programs use of the latter two sources is unlikely to provide beneficiaries with high continuity of care, thus potentially leading to still higher expenditures in the future.

WHY WOULD DOCTORS PARTICIPATE?

Physician participation in Medicaid involves a voluntary decision on the part of the physician. While some physicians may feel obliged to provide care for Medicaid patients and some may want to continue to treat former private patients who become Medicaid eligibles, there is no requirement for participation. Thus this decision is primarily entrepreneurial rather than clinical (although it can and will be affected by a physician's opinions with respect to social obligations and the role of government).

The physician participation decision with respect to both Medicare and Medicaid has been analyzed using an economic model of the physician as a price discriminating monopolist.[2] Basically the physician has the opportunity to participate in two or more markets of potential patients. The first, and presumed highest paying set of patients, includes private patients and may also include Medicare patients who may receive non-assigned services. A second set would include all other Medicare patients not also eligible for Medicaid. A third set includes Medicaid eligibles. In both the Medicare and Medicaid markets, prices to be paid for physician services are established as set payment rates held fixed for some period of time, while in the private market the physician has more control over price. A hierarchy of prices has been observed in the markets for specific physician services with private prices the highest (although less than the physicians' oft-quoted "usual" charge), followed by Medicare reasonable charges, with Medicaid paying the least (Cromwell and Burstein, 1985).

For the purpose of the model, private demand is assumed to be elastic, that is, as the physician raises the private market price, fewer services will be sought by those patients. Physician average cost is assumed to increase with volume. The latter two assumptions imply that marginal cost in-

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2 Strictly defined, a monopolist is the only seller of a particular good or service in a particular market. A seller who can influence (raise) the final market price due to control over a substantial portion of the total volume of a particular commodity or service has a substantial degree of monopoly power. A monopolist who can maintain different prices for different consumers is a discriminating monopolist (US Congress, OTA, 1986).

creases with volume and that marginal revenue in the private market decreases with volume. Figure 1 is reproduced from a recent exposition of this analysis focusing solely on Medicaid versus all other payors (Held and Holahan, 1985).

If the physician behaves as if he or she maximizes profit, price and output decisions will be made so that the marginal revenue from all patients is equal and marginal revenue will equal marginal cost. The existence of the many markets creates a kinked marginal revenue curve, and the relation of the Medicaid kink to marginal cost will determine whether the physician participates in Medicaid and to what extent. A physician will participate in Medicaid only if the payment rate for those services (Medicaid marginal revenue) is not less than the marginal cost of services at the level of total output.

A comparative-static[3] analysis of this model has several implications. Following Held and Holahan (1985), if there is excess demand for Medicaid services at existing fees, a decrease in the Medicaid fee will reduce the supply of services to Medicaid enrollees. In the (unlikely) event that there is no excess Medicaid demand, a decrease in Medicaid fees will not affect utilization. Second, if excess Medicaid demand exists, an increase in Medicaid eligibility will not increase utilization. Third, a relative reduction in private market demand such as might occur given increased physician

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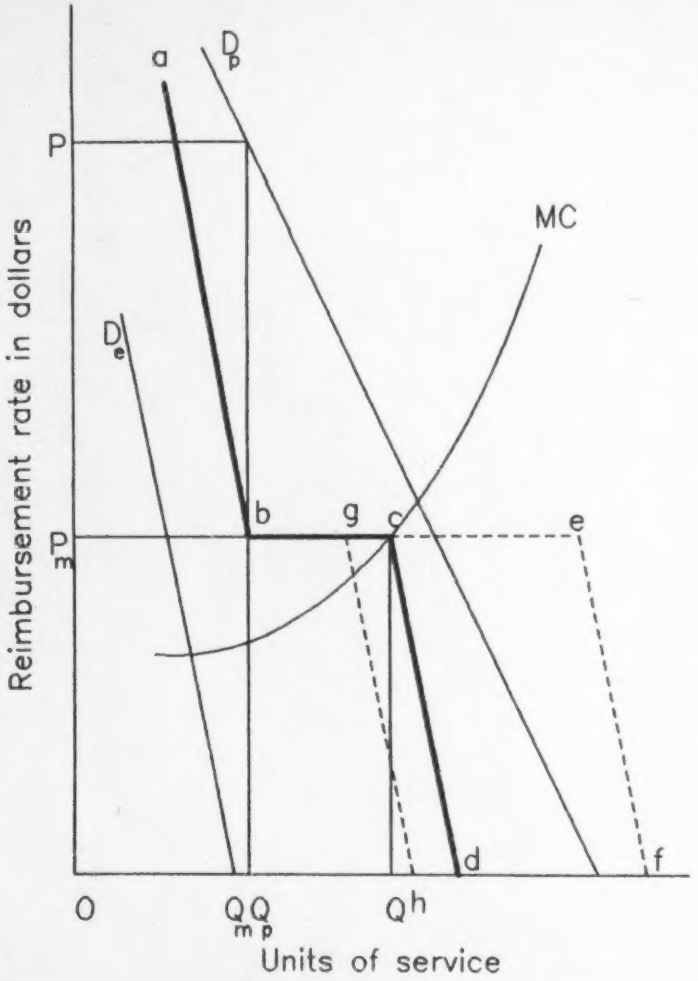
3 Such an analysis is conducted by considering changes in the level of the variables in the model, only one variable at a time. Because this involves a comparison of two or more otherwise static results, this type of analysis is referred to as "comparative statics."

FIGURE 1

PHYSICIAN SUPPLY IN THE MEDICAID AND PRIVATE MARKETS



The demand curve Dp represents the demand for services of a given physician by private patients. The demand curve De represents the hypothetical demand curve of Medicaid eligibles had they not been eligible. Because they are indeed eligible and there is no costs sharing in Medicaid, the relevant Medicaid demand facing the physician is represented by the segment 0Qm, the amount of services Medicaid patients demand at zero price. According to the theory of the price discriminating firm, physicians maximize profits by setting marginal revenue (revenue received for an additional unit of service) equal to marginal cost (cost of an additional unit) in both Medicaid and non-Medicaid markets. The marginal revenue curve is represented in this diagram by abcd.

The physician provides 0Q total units of service. Of these, 0Qp units are provided to private patients at price P and the remainder (Q-Qp) to Medicaid patients at price Pm. If 0Qm, Medicaid demand, is greater than (Q-Qp)--that is, if marginal revenue equals abef--then there is an excess demand for service by Medicaid recipients. In this case, the physician is unwilling or unable to provide all the services Medicaid recipients demand. If 0Qm is less than (Q-Qp)--that is, if marginal revenue equals abgh--then the physician will be willing to supply more services to Medicaid patients than they demand. Clearly, use of this model suggests that the amount of service a physician provides to Medicaid patients depends on the level of non-Medicaid demand and on other factors affecting physician willingness to supply services, such as costs, Medicaid fees, and the amount of potential Medicaid demand (depending on Medicaid eligibility criteria), in the market area.

Reproduced from Held and Holahan (1985)

population ratios, will mean that more Medicaid eligibles will receive service at any given Medicaid fee level. Finally, an increase in physicians' costs will result in less service being provided to Medicaid patients.

(A Euclidian extension of this analysis[4] yields the following results: assuming excess Medicaid demand, the share of a given practice's total services provided to Medicaid patients will decrease if there is a decrease in Medicaid fees, a relative increase in private market demand, or an increase in physician costs.)

Both economists and others have offered additional hypotheses on non-economic factors that may influence physician participation in Medicaid. These factors have included physician characteristics such as age; specialty; board certification; attitude towards government programs; foreign medical graduate (FMG) status; personnel costs; characteristics of the geographic location of practice such as per capita income, physician population ratios, percentage of population eligible for Medicaid, population density or rurality; and characteristics of the specific Medicaid program in question such as payment lags, administrative hurdles to provision of service or payment, and Medicaid allowed fees relative to fees billed by the physician. Regardless of the type of model proposed, typically these hypotheses have been tested using some type of multivariate statistical analysis. Some of the results of this type of study are summarized in Table 1. As predicted by the theory, relatively high Medicaid payments are associated with greater participation. Relatively high private market fees and high practice costs are asso-

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4 With a compass and straight-edge.

Table 1

Factors Associated with Physician Participation in Medicaid
[Sign of empirically estimated association between participation and factor]

FACTOR	AAP[1]	CHER[2] OBGYB	CHER[2] PEDIATRICS	URBAN[3]
Measure of Participation	*Physician respondent indicated that he or she accepts Medicaid patients*	*Medicaid patients as a percent of respondent physician's total*	*Medicaid patients as a percent of respondent physician's total*	*Physician provides service to at least 10 Medicaid patients*
Physician Characteristics				
Age/Years experience	- *	-	- *	-
Gender		-	+ *	
Place of medical education	+	+ *	+ *	
Board certification	-	- *	+ *	
Specialty-pediatrics				-
Specialty-obgyn				+
Social responsibility	+ *			
Non-physician personnel costs	+	+	+ *	+
Housing cost				-

Table 1 (continued)

Factors Associated with Physician Participation in Medicaid

Area Characteristics									
Per capita income	-	*		-	*		-	*	
Physician population ratio	-			-			-	*	
Physician/non Medicaid population									-
Physician/non Medicaid population squared									+
Percentage of population eligible for Medicaid	-			+	*		+	*	
Disabled									+
AFDC									-
Medically needy									+
Size/type of community									
Medicaid Program Characteristics									
Size/type of community	-								
Medicaid Fees	-			+	*		-		+
Private Fees	-			-	*		-	*	-
Administrative burdens	-			-	*		-	*	

* indicates that the reported relation was statistically significant at a confidence level of 5% or better.

SOURCES:

[1] *American Academy of Pediatrics Study:* Davidson, Stephen M., Perloff, Janet D., Kletke, Phillip R., Schiff, Donald W., and Connelly, John P., Variations By State In Physician Participation In Medicaid: Final Report, (Evanston, Illinois: American Academy of Pediatrics), October 1982. [HCFA grant #18-P-97159];

[2] Mitchell, Janet B., and Schurman, Rachel, "Access to private obstetrics/gynecology services under Medicaid," Medical Care, November 1984;

[3] Held, Philip J., and Holahan, John, "Containing Medicaid costs in an era of growing physician supply," Health Care Financing Review, Fall 1985.

ciated with lower participation. Older physicians seem less likely to participate. Physicians in States with relatively many administrative limits are less likely to participate.

These types of results should provide a guide to anticipating if not entirely understanding physician participation decisions. For example, private market fees continue to rise. Between 1976 and 1985, the physicians' services component of the Consumer Price Index (CPI) increased 112 percent. Over the same time period the aggregate CPI increased by 89 percent. Since 1981 physician prices have increased by 33 percent while the aggregate CPI has increased by 18 percent. For this reason, one might anticipate declining physician Medicaid participation rates.

Medicaid payment rates have not had a history of increases matching inflation (Holahan, 1984). Based on 1980 survey of Medicaid programs, many States indicated that payment rates were not adjusted periodically. In fact, in three of 23 States using fee schedules for physician reimbursement, those fee schedules had not been updated for 10 or more years. In theory, Medicaid payment rates are constrained by Social Security Act provisions to not exceed payment amounts made for comparable services recognized by Medicare in the same State. Although a few instances of this type have occurred, for the most part Medicaid rates are strictly below those of Medicare. In twelve States, including the five of the 10 largest Medicaid programs, Medicaid payments are less than 60 percent of comparable Medicare rates (Holahan, 1984).

A survey was conducted in 1985 to assess Medicaid provisions for care for low-income women (Rosenbaum, 1985). In all but 6 of the 30 States from which data were obtained the global fee method of payment was used. That is, a single payment covers prenatal services, the normal delivery, and some post-

partum services. Medicaid reimbursements for normal deliveries ranged from a low of $236 in New Jersey to a high of $750 in Oklahoma. Payments for Caesarian Sections were higher. In twelve States for which data were reported, payment levels ranged from a low of $498.75 in Mississippi to a high of $750 in Oklahoma. Available estimates from Medical Economics of what physicians were charging during the same time period for deliveries in the private market are generally higher than the Medicaid allowances (Kirshner, 1986). The median usual fee for complete obstetric care was $1,001 for obstetrician-gynocologists (OBGYNs), $701 for family practitioners (FPs), and $651 for general practitioners (GPs). The maximum Medicaid payment rate for deliveries was below the usual charge of 93% of OBGYNs, 47% of FPs, and 37% of GPs. Six percent of GPs reported usual charges less than $400, compared to 1% of FPs, and less than 1% of OBGYNs. For Caesarian Sections, the median usual charge for OBGYNs was $1,251, with 6% of the respondents reporting a usual fee of less than $800.

In addition to Medicaid fees being below physicians' opportunity costs for these services, actual practice costs are rising as well. HCFA estimates physician practice cost for the purpose of implementing the Medicare Economic Index (MEI). Between 1971 and 1985, estimated practice costs of physicians have increased by more than 150 percent.[5] Over that time period, most of the elements of practice expense increased by 120 to 160 percent, but premiums for professional liability insurance nearly quadrupled.

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5 This is a slight underestimate, because the MEI value was not updated during fiscal 1984 as mandated by the Deficit Reduction Act of 1984.

The latter cost element is of particular concern to OBGYNs, and it has been alleged to have had a significant impact not only on OBGYN participation in Medicaid, but also on OBGYN participation in the practice of obstetrics for all patients. For example, a 1985 survey of California OBGYNs and general and family practitioners who have performed deliveries examined the question of the impact of increasing medical malpractice premiums (Hough and Jones, 1985). Among 1,003 OBGYNs surveyed, 5.9 percent had eliminated deliveries from their practice and 9.5 percent had reduced the number of deliveries they perform. The comparable estimates for the 405 GP/FP respondents were 32.3 percent and 4.2 percent, respectively. Among GP/FPs, respondents with lower reported annual delivery volumes were more likely to have eliminated their delivery practice. For both sets of specialties, low volume respondents were more likely to have reduced their delivery practice.

Increasing costs per se may not be the most important issue with respect to this topic. Although malpractice insurers do establish different risk groups for the different physician specialties, HCFA surveys suggest that in most cases the annual percentage increases in premiums are identical across all risk categories; hence, malpractice premiums typically do not increase faster for OBGYNs than for other specialties. While OBGYNs may pay higher malpractice premiums than many other physicians, reported median malpractice expenses from the specialties of neurosurgery, orthopedic surgery, and thoracic surgery exceed those of OBGYNs (Paxton, 1986). In terms of the percentage of gross professional revenues, OBGYNs are above the average for all surgical specialists, but both neurosurgeons and anesthesiologists pay an even greater proportion of their gross for malpractice premiums. However, OBGYNs

may be unique in that their practices can be reoriented to move out of a high risk category and into a lower one by eliminating obstetrical services from the repertoire of services offered to their patients (Kaufman, 1986).

MEASURING PARTICIPATION

While participation is an all-or-none decision with respect to an individual occasion of service, a physician's participation decisions in the aggregate may not be so all-or-none. Previous studies appear to indicate that while few physicians do not provide services to any Medicaid patients, few physicians do provide services to many Medicaid patients. As cited earlier, a study of a 1975 survey found that while Medicaid patients accounted for 10 percent of all physicians' office visits on average, 5 percent of the physicians reported that more than 50 percent of their patients were Medicaid recipients, and nearly 30 percent of the physicians reported that less than 1 percent of their practices consisted of Medicaid patients (Sloan, et al., 1977).

There is also a question as to the best way to elicit this information. A recently published study of pediatricians' participation (Kletke, et al., 1985) suggests that estimates of practice shares derived from physician surveys may be overstated by as much as 40 percent. On the other hand, a least one State, Pennsylvania, maintains counts only of those participating practices that meet a minimum volume threshold. Some participation estimates from those data therefore will be understated. The participation phenomenon itself as a measure of patient access to care is not without its variations. Some physicians may treat few Medicaid patients but might be willing to treat

any others who presented themselves. Other physician practices that treat significant numbers of Medicaid patients may make it a practice not to accept any new Medicaid patients.

Several refinements have been made to address these issues. Setting a minimum volume threshhold to qualify as a "participating" Medicaid practice is one way to identify practices with a more than passing involvement with the program. In studies of Medicaid participation in California conducted by the Urban Institute, various patient thresholds were examined. Table 2 is reproduced from one of those studies. In terms of providing services to at least 1 Medicaid patient per quarter, participation rates for primary care physicians ranged from 68.9 percent to 73.9 percent between 1974 and 1978. When limited to physicians who provided services to at least 10 patients per quarter, estimated primary care participation rates varied from 47.6 percent to 52.1 percent during the same time period. Finally, using a threshold of 20 patients per quarter, primary care participation rates were observed to vary from 35.4 to 40.2 percent.

Some States do maintain data on physician participation in terms of volume of patients, claims, or total reimbursements. In fact, for a brief period in 1983-84 HCFA initiated a reporting requirement (HCFA 350) that would have partitioned practice counts by dollar ranges of reimbursements. Unfortunately, the initial submissions from the States were of sufficiently uneven quality (thought to be due to variations in the accounting of "out of state" physicians) that the Office of Management and Budget (OMB) revoked permission to require the data. No publications based on these data were ever produced.

Table 2

Percent of solo practice primary care physicians participating in Medicaid, by year, and definition of participation (patient minima): California, 1974-1978

Patient minima per quarter	1974	1975	1976	1977	1978
1	69.7	73.9	72.1	71.3	68.9
10	47.6	52.0	50.4	52.1	48.7
20	35.4	39.7	38.3	40.2	38.4

Source: Held, Philip J., and Holahan, John, "Containing Medicaid costs in an era of growing physician supply," Health Care Financing Review, Fall 1985.

Davidson, et al.(1982) looked directly at the question of limited participation in Medicaid by pediatricians. Using the 1976 basic HCFA physician survey, a supplementary set of questions was asked of pediatricians in 13 States. This allowed direct discernment of physicians who had no Medicaid patients (non-participants), from those who had Medicaid patients and were accepting new patients from any payor group (full participants), from those who had Medicaid patients, but were accepting new patients only, from non-Medicaid sources (limited participants). (Practices with Medicaid patients but not accepting any new patients were the remaining group.) A discriminant function analysis of these data revealed that, compared to limited participants, full participants had lower non-physician personnel costs, were located in smaller communities, received higher Medicaid fees, and perceived in their States shorter billing lags and more generous administrative provisions. In short, the types of variables found to affect the participation decision appeared to also affect the extent of participation.

PRACTICE SHARE

One less direct way of examining variations in physician participation has been to use the apparent extent of participation as a dependent variable. The share of the practice's patients or visits that are devoted to Medicaid is used as the measure of extent of participation with a view to finding variables associated with particularly high or low shares. While this may address the statistical question of dealing with respondent observations with very small numbers of Medicaid patients, it may misdirect attention with respect to potential Medicaid patient access to health care services. As noted earlier, the comparative statics from the model of a price discriminat-

ing monopolist reveal that Medicaid practice share changes will have the same sign as Medicaid volume changes for a single physician, but the aggregate results for the physician market in a particular area are not determinate. For example, in an area with relatively few pediatricians, average practice shares devoted to Medicaid might be higher than those observed in an otherwise comparable area with many pediatricians, yet this need not imply that beneficiary access is any greater. Further, given the increase in the number of practicing physicians in this country, one would expect average practice shares to be declining. Yet if the number of practices increases faster than the number of eligibles, even a stable average practice share would be consistent with enhanced access.

Unfortunately, physician surveys to elicit such information are costly, and there is some question as to the accuracy of their results. A survey conducted by the California Medical Association (Jones, 1977) in 1974 indicated that 43.1 percent of physicians "probably would" accept a new Medicaid patient, 19.9 percent "might" accept a new patient, 24.6 percent "probably would not", and 12.4 percent "definitely would not" accept a new Medicaid patient. (A repeat survey conducted in 1977 yielded somewhat lower probabilities for participation; 40.5, 17.4, 25.4, and 16.8 percent, respectively.) Shortly after the results of the first survey were published the results of a less scientific poll were published [reference] based upon calls to random physicians from purportedly new Medicaid patients looking for a physician. These results suggested that only the "probably would's" probably would.

There is also a question with respect to the reliability of physicians' estimates of the extent of their practices devoted to Medicaid patients. In the pediatrician supplementary survey to the HCFA physician

practice cost and income survey conducted in 1979, additional information including payment source was collected on a sample of patient office visits (Davidson, et al., 1982, Kletke, et al., 1985). Thus, in addition to the physician's response to the question on what proportion of his or her patients had Medicaid coverage, a sample of approximately 35 office visits was available from which the extent of actual Medicaid coverage was later ascertained.

Although there was a close correlation between the two measures of Medicaid participation/practice share, the average difference between the two measures was not zero. In fact, the average value of physician survey estimates was 13 percent while the average value from the patient record samples was 7.7 percent. (With respect to only those pediatricians who reported positive Medicaid practice shares, the average values were 15.1 and 8.9 percent, respectively.) This has been interpreted to imply that physician estimates of the extent of their participation in Medicaid are 40 percent too high.

The authors of this study explored potential sources of error in this interpretation. In particular, they examined the question of whether the survey question relating to the percentage of Medicaid <u>patients</u> might be expected to differ from the results with respect to the percentage of Medicaid <u>visits</u> as measured by the patient abstracts. This might be a problem if either the office visit patients that were sampled differed from the average selection of patients over the course of the year or if Medicaid children tended to receive fewer office visits on average than non-Medicaid children. The authors conclude that although the samples of visits were concentrated during the months of August and September, the sample selection during those months was not unrepresentative. With respect to the question of annual per capita visits by

Medicaid children, the authors have synthesized a number of published estimates on physician visit frequency by income classes to show that children in low income families receive as many, if not more, office visits annually than children from higher income families.

There remain a number of other explanations not addressed by the Kletke, et al.(1985) article and only partially addressed in the earlier final report to HCFA (Davidson, et al., 1982). These involve the sample sizes needed to assure that a low frequency occurance will be observed, possible physician confusion between patients of low income families and those of Medicaid families, and possible differences in site of care by income class/Medicaid status.

With respect to sample sizes, the skewedness of the distribution of reported Medicaid percentages toward the lower end suggests the possibility that not observing a Medicaid office visit in a 35 visit sample would not be implausible. In particular, nearly one quarter of the surveyed pediatricians reported Medicaid percentages greater than zero but less than 5 percent. Although the distribution of differences between individual estimates of Medicaid participation is presented in the Kletke article, differences by estimated level of participation are not presented for such an examination.

With a sample size of 35, there is a 50 percent probability that no Medicaid children would have been observed in a physician practice with a Medicaid share of just under 2 percent. For that size of sample one practice in six with a 5 percent Medicaid share would exhibit no Medicaid patient office visits, as would nearly one quarter of those with a 4 percent share, more than one third of those with a 3 percent share, half with a 2 percent share, and over 70 percent of those with a 1 percent share. Given the observed

propensity of physicians in the HCFA surveys to respond to questions on percentages with numbers ending in zero or five--a phenomenon that also might tend to lead to "overestimates" in this range[6]--a somewhat larger proportion of those low share practices might be observed with no Medicaid office visits compared to the strict mathematical expectation.

In the final report (Davidson, et al., 1982) these differences between the physicians' estimates and their patient samples were regressed on physician characteristics. Only two variables were found to be significant in this regression, the reported percentage of the physician's patients who were black or hispanic (positive correlation with an "overestimate") and the per capita income in the zip code area of the physician's practice (negative correlation). Both suggest a potential physician confusion between low income patients and Medicaid patients. On the one hand, the physicians may, in fact, have overstated their actual Medicaid percentages. On the other hand, they may only be reflecting the patterns of their service to a population of particular interest regardless of whether those individuals have met program income eligibility criteria that might otherwise be believed to be too low.

The remaining, somewhat mechanical explanation involves differences in the site of care by income class/Medicaid status. In the HCFA survey physicians were asked what percentage of their patients were covered by

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6 In fact, one might conjecture that most of the "overestimate" is due to this phenomenon. Approximately one third of the pediatricians reported positive practice shares less than 5 percent, and about 15 percent reported shares between 5 and 10 percent. If both groups rounded up to the nearest 5 percent, the first group might exhibit overestimates of 100 percent, the second, overestimates of 33 percent. The absolute average overestimate might only be 2.5 percentage points, but with nearly half of the respondents starting on such a small base, this casual rounding response may appear exaggerated.

Medicaid (Davidson, et al., 1982, Appendix A). They were not asked what percentage of patients seen in the office were covered by Medicaid. In fact, in synthesizing the estimate of annual office visits by low income children, the authors cite statistics suggesting that a lower percentage of low income children had their last physician contact as an office visit (55.8 percent for children in families with incomes less than $5,000 in 1975-76 compared to 67.1 percent in families with incomes in excess of $15,000). If low income children are a relatively small proportion of a pediatrician's patient volume across all sites of care and if those children are less likely to be seen in the physician's office, one might expect to find fewer low income/Medicaid office patient records than would otherwise be expected. This may not reflect well on the relative treatments provided to these two groups of children, but it need not indicate that pediatricians overestimate their participation in the Medicaid programs.

RECENT DATA

With some hesitancy about data validity, there are statistics that can be presented about the levels of physician participation--and specifically pediatrician and obstetrician participation--in the Medicaid programs. Table 3 summarizes recent national survey data on physician participation and practice shares. The primary sources are the HCFA surveys of 1975, 1978, and 1983. If anything, these data show stable if not increasing percentages of physicians reporting participation in Medicaid. Practice shares for most specialties increased somewhat between 1975 and 1978, but declined somewhat between 1978 and 1983.

Table 3.--Survey-Based Data on Recent Trends in Medicaid Participation, by Physician Specialty

Specialty	Percentage of physicians who participate					Percentage of participating physicians' practice share devoted to Medicaid patients			
	1976[a]	1978[b]	1983[c]	1983[d]	1984[e]	1976[a]	1978[b]	1983[d]	1984[e]
All physicians		76.5			82.8	11.9	9.1		
Pediatrics	73.6	76.9		82	81.5	10.8	14.1	14.7	15.7
Obstetrics/gynecology	60.0	64.4	46		72.2	9.7	8.4		10.0
General practice	71.4	75.1	67		80.4	11.6	13.1		10.6
Family practice			67		86.8				10.6
Internal medicine	66.5	79.8			80.4	7.9	13.2		7.6
Cardiology		68.1			85.5		6.9		6.3
Other med. specialties					84.3				7.1
General surgery	73.9	90.3			87.1	11.5	13.4		11.6
Orthopedic surgery		81.4			88.3		9.8		6.8
Ophthalmology		82.0			87.0		13.2		6.4
Urology		88.9			92.9		13.2		9.1
Other surg. specialities					82.5				6.9
Psychiatry		57.8			60.0		8.0		5.9
Anesthesiology					97.2				9.3
Pathology					91.9				7.9
Radiology					94.2				8.9
Other specialities					84.7				10.0

[a] F.A. Sloan, J. Cromwell, and J.B. Mitchell, Private Physicians and Public Programs (Lexington, MA: 1978).
Survey question: In the last week, what percentage of visits were with Medicaid patients?

[b] J.B. Mitchell, and R. Schurman, "Access to Private Obstetrics/Gynecology Services Under Medicaid," Medical Care 22(11):1026-37, 1984.

[c] Alan Guttmacher Institute Physician Survey, 1983, unpublished data on physician participation in Medicaid, New York, NY, 1983.
Survey question: In your private practice, do you accept Medicaid reimbursements for deliveries?

[d] J.D. Perloff, P.R. Kletke, and K.M. Neckerman, "Trends in Pediatrician Participation in State Medicaid Programs," Medical Care 24(8):749-760, 1986.

[e] J. Mitchell, "Health Care Financing Administration/National Opinion Research Corporation, Physician Practice Costs and Income Survey, 1984-1985, unpublished data" Center for Health Economics Research, Chestnut Hill, MA 1986.

SOURCE: Office of Technology Assessment, 1988.

For pediatrics, participation rates have been increasing over time. Estimated national participation rates ranged from 73.6 percent in 1975, to 76.9 percent in 1978, to 81.5 percent in 1983. The American Academy of Pediatrics piggy-backed their supplementary surveys on the HCFA vehicles in 1978 using a 13 State subsample of the nation. Estimated participation rates in those States were higher than the national average in both years, but declined between 1978 and 1983. Reported practice shares for pediatricians increased in the national samples from 1975 to 1983. Estimates for the three HCFA surveys were 10.8 percent in 1975, 14.1 percent in 1978, and 16.7 percent in 1983. Practice shares in the 13 State subsample fell from 15.7 percent in 1978 to 14.7 percent in 1983.

The pattern for OBGYNs is different from that of the pediatricians. All sources suggest that both Medicaid participation rates and practice shares are lower for OBGYNs than for pediatricians or other physician specialties. In the HCFA survey data, OBGYN participation rates exhibit increases over time. Practice shares appeared to decrease between 1975 and 1978, but increase between 1978 and 1983.

A survey of physicians who perform deliveries was conducted by the Alan Guttmacher Institute (AGI) in 1983, providing an additional source of information on Medicaid participation. The question asked of respondents was, "In your private practice, do you accept Medicaid reimbursements for [sic?] delivery system?" (Alan Guttmacher Institute, 1983). The analogous question from the HCFA surveys asked what percentage of patients had Medicaid coverage. The participation rate estimates from AGI are much lower than the HCFA estimates for both OBGYNs and general and family practitioners. This could result from physician respondents having made a differentiation between their

private (office?) practice and other sites of service such as a clinic or hospital practice plan. They might also have made a distinction between accepting a Medicaid patient for obstetrical services versus accepting that patient for gynecology services only. Both circumstances would be consistent with a lower estimated participation rate using the AGI data compared to the HCFA data. Although both circumstances suggest differences in access to care for Medicaid patients, the import of this difference in rates would be more significant for access to care if the second explanation is correct.

Table 4 presents HCFA data collected from each of the state Medicaid programs on the number of participating physician practices. These statistics should be interpreted as suggestive of the variations in participation rates around the country rather than definitive estimates of participation rates. First, these statistics are based on counts of practices rather than counts of physicians. Hence, if large groups are more likely to participate than are small groups or solo practices, the data may understate the proportion of physicians with Medicaid participation. Second, while a potential denominator--practices enrolled--is presented, that number is neither the universe of physicians nor the universe of practices. The number of enrolled practices is a function of whether a practice has ever approached the Medicaid program for payment for services and how frequently the file of such practices is purged for inactive entries. As a result, these statistics may be either too small or too big. For example, if the files are not regularly purged, they may contain physicians who are no longer in practice. Further, if a physician with a file entry establishes a partnership with another physician in practice, the files could indicate three practices or two practices or one practice. On the other hand, if a physician never bills for ser-

Table 4

ENROLLED AND PARTICIPATING MEDICAID PHYSICIANS
UNITED STATES, mid-1986

STATE	NUMBER OF PHYSICIANS ENROLLED	NUMBER OF PHYSICIANS PARTICIPATING	FILE BASED ON INDIVIDUALS	FILE BASED ON INDIVIDUALS AND GROUPS	DATE OF LAST UPDATE
AL	9688	9688	X		1985
AK			X		
AR	4615	1063		X	1985
CA	45845	31703		X	1986
CO	6922			X	
CT	4791	2594		X	1981
DE	1100	1100	X		
DC	4022	1812		X	1981
FL	18190	14104		X	1985
GA	8500	8500	X		1986
HI	2570	2570		X	1985
ID	4112	1617		X	1985
IL	22282	16055	X		1986
IN	12726	7225		X	1984
IA	6592	4927		X	1986
KS	8729	4611		X	1985
KY	15221	2537		X	
LA	8285	3994		X	1986
ME	3253	1619		X	
MD	13220	4968		X	1982
MA	11580	11580	X		1986
MI	19453			X	1981
MN	13079	8351		X	1986
MS	6119	4290	X		1984
MO	14327	5730		X	
MT	1528	1528	X		1985
NE	2023	1062		X	1986
NV	1700	1650		X	1986
NH	2356	481		X	1985
NJ	9356	4650		X	1985
NM	3822	1629		X	1984
NY	43811	38496		X	1986
NC	6000	2300		X	1983
ND	1955	609		X	1985
OH	27478	23378		X	1985
OK	10000	10000	X		
OR	9526	5239		X	1986
PA	24645	17498		X	
RI	1657	1657		X	1986
SC	5550	3879		X	
SD	2777	1229		X	1986

TN	10646	5507		X	1981
TX	22781	17776		X	1986
UT					
VT	2800	2400		X	1985
VA	9269	7658	X		1986
WA	12295	5429		X	1985
WV	4753	3493		X	1986
WI	12303	6067		X	1986
WY	1130	1130		X	

Source: Health Care Financing Administration, Medicaid Statistics Branch, unpublished data, 1986.

vices to Medicaid patients, he or she may not be counted among the enrolled. And if the files are purged more than once per year the apparent count of enrolled practices may only be as great as the number of participating practices. This appears to be the case in the data from nine of the states.

UTILIZATION BY CHILDREN

Although HCFA records in Baltimore do not include information on physician specialty, there are required reports from the States (HCFA 2082) that partition expenditures and recipients of care by aid category and basis of eligibility, specifically children in families with dependent children and other Title XIX eligibles, "Ribicoff" children. These statistics can provide an indirect measure of children's access to care through the Medicaid program regardless of physician specialty. Tables 5 through 7 present data on recipients of service, expenditures, per recipient expenditures for physician services, outpatient hospital services, and inpatient hospital services for the United States as a whole for fiscal years 1980 through 1985.

Children in families with dependent children eligible for cash assistance represent more than 80 percent of all children recipients of physician services under Medicaid. The total number of those recipients remained nearly constant between fiscal year 1980 and 1985, while recipients from Aid to Families with Dependent Children (AFDC) families not receiving cash assistance more than doubled. Other Title XIX recipients not eligible for cash assistance increased from nearly 45,000 to more than 170,000. Because the cash assistance AFDC recipient population was so stable, in the aggregate, total recipients increased by only 4 percent over that time period.

Table 5

Medicaid Recipients and Expenditures for Physician Services for Children
United States Totals, Fiscal Years 1980-85

NUMBER OF RECIPIENTS

		Cash	Non-Cash		Medically Needy	
	ALL CATEGORIES	AFDC Children	AFDC Children	Other Title XIX	AFDC Children	Other Title XIX
1980	6,445,287	5,567,900	159,633	44,478	357,166	316,110
1981	6,821,568	5,853,327	225,488	87,889	403,399	251,465
1982	6,506,392	5,547,626	256,015	91,065	371,134	240,552
1983	6,491,635	5,433,686	270,065	99,475	407,057	281,352
1984	6,757,749	5,615,745	303,536	154,670	411,100	272,698
1985	6,723,966	5,539,812	326,128	170,293	417,717	270,016

EXPENDITURES

		Cash	Non-Cash		Medically Needy	
	ALL CATEGORIES	AFDC Children	AFDC Children	Other Title XIX	AFDC Children	Other Title XIX
1980	587,159,557	478,339,066	14,782,013	7,361,719	35,003,184	51,673,575
1981	638,741,020	522,094,642	21,451,432	8,916,460	42,085,871	44,192,615
1982	625,492,908	509,641,163	21,755,342	10,546,106	41,162,844	42,387,453
1983	644,895,460	525,646,103	23,618,464	11,801,546	43,087,209	40,742,138
1984	698,694,547	567,882,868	27,134,154	17,569,346	44,322,222	41,785,957
1985	718,349,359	566,411,189	34,922,519	23,441,085	49,946,421	43,628,145

PER CAPITA EXPENDITURES

		Cash	Non-Cash		Medically Needy	
	ALL CATEGORIES	AFDC Children	AFDC Children	Other Title XIX	AFDC Children	Other Title XIX
1980	91	86	93	166	98	163
1981	94	89	95	101	104	176
1982	96	92	85	116	111	176
1983	99	97	87	119	106	145
1984	103	101	89	114	108	153
1985	107	102	107	138	120	162

SOURCE: Health Care Financing Administration, Medicaid Statistics Branch, unpublished statistics, 1986.

Table 6

Medicaid Recipients and Expenditures for Inpatient Hospital Services for Children, United States Totals, Fiscal Years 1980-85

	NUMBER OF RECIPIENTS					
		Cash	Non-Cash		Medically Needy	
	ALL CATEGORIES	AFDC Children	AFDC Children	Other XIX	AFDC Children	Other XIX
80	1119111	840,162	39,753	8,365	98,247	132,584
81	1079671	809,579	48,809	19,440	96,536	105,307
82	1007081	736,277	44,568	21,163	85,562	119,511
83	1023540	724,760	53,945	24,243	102,650	117,942
84	974566	694,461	54,100	28,298	96,487	101,220
85	1007932	686,585	74,971	41,612	102,344	102,420

	EXPENDITURES					
		Cash	Non-Cash		Medically Needy	
	ALL CATEGORIES	AFDC Children	AFDC Children	Other XIX	AFDC Children	Other XIX
80	1,727,245,215	1,218,741,724	53,792,619	17,001,998	203,553,863	234,155,011
81	1,835,438,616	1,308,668,654	76,588,018	33,670,288	209,930,050	206,581,606
82	1,854,885,210	1,305,181,165	74,740,918	43,200,574	212,672,495	219,090,058
83	2,074,521,357	1,433,803,993	93,377,025	52,405,202	243,884,590	251,050,547
84	2,144,412,997	1,499,875,194	98,743,056	72,450,028	248,875,301	224,469,418
85	2,379,187,759	1,601,753,751	149,082,040	108,691,896	276,936,202	242,723,870

	PER CAPITA EXPENDITURES					
		Cash	Non-Cash		Medically Needy	
	ALL CATEGORIES	AFDC Children	AFDC Children	Other XIX	AFDC Children	Other XIX
80	1,543	1,451	1,353	2,033	2,072	1,766
81	1,700	1,616	1,569	1,732	2,175	1,962
82	1,842	1,773	1,677	2,041	2,486	1,833
83	2,027	1,978	1,731	2,162	2,376	2,129
84	2,200	2,160	1,825	2,560	2,579	2,218
85	2,360	2,333	1,989	2,612	2,706	2,370

SOURCE: Health Care Financing Administration, Medicaid Statistics Branch, unpublished statistics, 1986.

Table 7

Medicaid Recipients and Expenditures for Hospital Outpatient Services for Children, United States, Fiscal Years 1980-1985

NUMBER OF RECIPIENTS

		Cash	Non-Cash		Medically Needy	
	ALL CATEGORIES	AFDC Children	AFDC Children	Other XIX	AFDC Children	Other XIX
1980	5,113,475	3,623,083	209,225	22,775	405,900	852,492
1981	5,127,747	3,646,953	253,771	82,802	381,123	763,098
1982	5,068,599	3,511,390	275,600	85,412	383,894	812,303
1983	4,873,410	3,467,433	315,951	111,405	375,643	602,978
1984	4,916,586	3,472,845	329,612	159,794	375,572	578,763
1985	5,043,085	3,507,167	361,839	165,473	399,876	608,730

EXPENDITURES

		Cash	Non-Cash		Medically Needy	
	ALL CATEGORIES	AFDC Children	AFDC Children	Other XIX	AFDC Children	Other XIX
1980	445,092,962	343,120,283	12,177,524	3,276,195	26,195,023	60,323,937
1981	557,241,012	440,336,719	16,721,607	6,330,038	35,539,576	58,313,072
1982	552,977,436	429,312,130	18,572,627	8,132,995	35,017,156	61,942,528
1983	604,262,551	460,956,674	23,812,070	11,666,087	38,485,873	69,341,847
1984	611,677,425	474,270,040	24,178,387	22,093,645	37,237,114	53,898,239
1985	662,384,173	504,162,735	28,224,865	27,173,942	43,739,341	59,083,290

PER CAPITA EXPENDITURES

		Cash	Non-Cash		Medically Needy	
	ALL CATEGORIES	AFDC Children	AFDC Children	Other XIX	AFDC Children	Other XIX
1980	87	95	58	144	65	71
1981	109	121	66	76	93	76
1982	109	122	67	95	91	76
1983	124	133	75	105	102	115
1984	124	137	73	138	99	93
1985	131	144	78	164	109	97

SOURCE: Health Care Financing Administration, Medicaid Statistics Branch, unpublished statistics, 1986.

From 1980 to 1985, expenditures for physician services in aggregate increased by 22 percent, in spite of decreasing between fiscal year 1981 and 1982. As a result, per recipient expenditures for Medicaid physician services for children increased by 18 percent. Over the same time period, however, the physicians services component of the CPI increased by 48 percent. As a result, estimated real physician services per recipient declined each year between fiscal 1980 and 1985 for an aggregate decrease of 21 percent. Given the slight increase in recipients of service one can conjecture that physical access to physicians' services may not have diminished over that time period, but the quantity of physician service provided to the average Medicaid child did decline.

One hypothesis advanced to explain the decreases in the use of physician services by Medicaid beneficiaries (among others) is that there may be a resulting increase in the use of hospital services. (According to this argument, if Medicaid beneficiaries do not use physician services for preventive care, they subsequently will require hospitalization for medical conditions that might have been prevented.) Alternatively, if expenditures for physician services had been constrained by not increasing physician fees, reduced access to physicians' offices might be matched by increased utilization of hospital outpatient departments (OPD). (According to this argument, lower fees will lead physicians to drop out of the Medicaid program. Consequently, when Medicaid beneficiaries try to obtain access to physician care they will be unable to do so through private practice physicians, and will therefore turn to hospital OPDs as sources of care.)

Nationally, Medicaid expenditures for both inpatient and outpatient services did increase from 1980 to 1985. Inpatient expenditures increased by 38 percent, while OPD expenditures increased by 49 percent. The number of hospitalized children, however, remained nearly constant over the time period. Per recipient inpatient hospital expenditures increased by 53 percent compared to a 67 percent increase in the hospital and other medical service component of the CPI. Medicaid children who received services in hospital outpatient departments were stable or declining in number slighty over this time period.

Although these data do not permit one to draw conclusive inferences, they do not lend strong support to the increased-hospital-use hypothesis. On the other hand, given a pattern of use of both physician offices and outpatient departments, there may be some shifting of the site of care between those two settings consistent with a physician response to declining real Medicaid reimbursement rates. In 1980 total OPD payments were only 75 percent of the level of payments for physician services. By 1985 this ratio had increased to 92 percent. (It is also conceivable that this ratio would have risen if physician payments were relatively constrained while payments to hospital outpatient departments were not. Over this time period, the hospital and medical care services (excluding hospital room rates) subcomponent of CPI increased by 66 percent compared to an increase of 48 percent in the physicians services subcomponent of CPI.)

Tables 8 through 13 present data on physician services and outpatient department services for each of the states over the same time period. The patterns of changes in use are consistent across the services, although those patterns vary markedly across the states. For example, although the national totals of recipients for both services were relatively stable over time,

Table 8

Medicaid Recipients and Rates of Growth for Physician Services for Children FY 85 and Growth Since FY 1980

	NUMBER OF RECIPIENTS AND PERCENTAGE GROWTH SINCE 1980											
			Cash		Non-Cash				Medically Needy			
	All Categories		AFDC Children		AFDC Children		Other XIX		AFDC Children		Other XIX	
	#	%	#	%	#	%	#	%	#	%	#	%
AL	85,636	10.6	79,524	2.9	3,351	1837	2,761	NA*	0	NA	0	NA
AK	9,326	97.2	6,477	50	0	-100	2,849	1595.8	0	NA	0	NA
AR	56,867	-8.8	41,521	-15.2	866	NA	962	NA	5,074	117.1	8,444	-23.3
CA	1,059,980	-1.1	801,120	3.8	20,240	932.7	0	NA	122,560	-15.4	116,060	-24.2
CO	33,057	7.9	24,067	-5	8,990	350.9	0	-100	0	NA	0	NA
CT	63,300	-22.8	50,784	-33.9	1,372	NA	2,383	NA	3,202	-24.7	5,559	493.3
DE	17,037	-19.9	14,807	-21.9	660	-10.7	1,570	-0.2	0	NA	0	NA
DC	34,608	-6	28,816	-14.6	1,042	403.4	2,394	NA	2,221	-21.9	135	694.1
FL	160,762	12.1	147,508	10.1	9,746	2.8	3,508	NA	0	NA	0	NA
GA	142,218	31.9	124,712	24.7	15,786	151.5	1,034	-34.8	682	NA	4	NA
HI	41,600	7	35,556	16.8	21	-98.2	1	-99.9	5,239	50.8	783	-58.9
ID	13,877	-9.1	12,511	-10.6	875	61.4	491	-31.4	0	NA	0	NA
IL	433,395	-6.8	401,965	-9.7	6,097	NA	5,905	NA	19,428	45.2	0	-100
IN	110,058	74769.4	99,173	87663.	10,855	31826.	30	NA	0	NA	0	NA
IA	93,685	33	75,776	19.3	5,029	119.8	11,122	141.5	634	NA	1,124	NA
KS	59,841	-5.5	51,334	26.2	3,214	226.3	237	NA	4,410	-17.6	646	-96
KY	153,502	15	102,496	-1.9	3,717	-6.6	0	NA	43,968	268.8	3,321	-74.6
LA	68,855	-38.5	63,748	-38.8	2,150	-47.5	1,655	NA	1,302	-17.3	0	-100
ME	46,298	-9	35,098	-3.7	9,139	4.9	0	-100	2,061	-46.9	0	NA
MD	118,591	1.6	102,170	2.3	1,295	NA	0	NA	11,999	-28.6	3,127	NA
MA	127,343	-53.2	93,865	-63.2	4,109	NA	8,395	NA	8,519	-39.6	12,455	300.7
MI	452,011	3.3	368,380	-10.1	18,951	NA	0	NA	19,309	-14.9	45,371	807.8
MN	128,007	24.3	93,298	7.4	2,353	3465.2	99	NA	7,021	318.7	25,236	76.1
MS	100,882	-11.9	95,109	-7.7	5,040	-53.6	733	15.8	0	NA	0	NA
MO	94,917	28.9	86,114	18.8	6,686	581.5	2,117	1050.5	0	NA	0	NA
MT	16,157	-3.6	11,956	-9.2	3,718	76	0	-100	483	NA	0	NA
NE	34,567	71.7	27,933	59.4	2,437	252.7	3,816	NA	221	63.7	160	-91.1
NV	7,788	8.5	6,447	6.9	323	32.4	1,018	12.4	0	NA	0	NA
NH	10,382	-22.3	8,127	-31.4	1,727	175.4	136	-11.1	387	-45.6	5	-61.5
NJ	240,565	20.9	211,812	13.6	18,587	90.5	10,166	266.5	0	NA	0	NA
NM	29,727	-3.8	28,275	1	1,424	70.1	28	-98.6	0	NA	0	NA
NY	735,008	10.3	589,404	-4.3	35	NA	46,635	NA	66,735	95.6	32,199	102.3
NC	94,215	-10.3	76,185	-13.1	8,628	39.8	2,381	NA	6,461	-16.8	560	-84.1
ND	13,152	53	8,566	27.2	43	-83.2	6	NA	1,521	98	3,016	258.6
OH	397,251	52.9	383,156	54.6	13,990	17.9	105	NA	0	NA	0	NA
OK	69,968	15.6	48,939	6.2	11,683	-16.3	761	NA	7,178	1646.5	1,407	1429.3
OR	47,100	-34.4	37,862	-26.1	4,211	260.2	3,815	-80.3	1,212	NA	0	NA
PA	371,103	-8.9	256,324	-24.7	28,721	338.4	32,421	NA	48,600	69.7	5,037	-84.2
RI	29,764	-17.2	27,991	-18.8	310	NA	289	NA	1,174	-18.5	0	-100

Table 8 (continued)

Medicaid Recipients and Rates of Growth for Physician Services for Children FY 85 and Growth Since FY 1980

	NUMBER OF RECIPIENTS AND PERCENTAGE GROWTH SINCE 1980											
			Cash		Non-Cash				Medically Needy			
	All Categories		AFDC Children		AFDC Children		Other XIX		AFDC Children		Other XIX	
	#	%	#	%	#	%	#	%	#	%	#	%
SC	69,993	-4.9	52,170	-24.4	15,118	319	157	-84.7	2,548	NA	0	NA
SD	9,260	-12.9	7,827	-21.4	544	4.4	889	500.7	0	NA	0	NA
TN	97,619	12.8	73,087	-1	12,190	96.4	7,217	NA	5,125	22.3	0	-100
TX	240,644	23.2	223,335	20.9	13,433	26.8	2,097	NA	1,779	NA	0	NA
UT	32,977	35.2	22,630	16.8	5,664	260.1	0	NA	23	-96	4,660	62.4
VT	18,143	-7.9	12,391	-13.4	4,552	7.5	728	NA	453	11.9	19	-97.5
VA	102,430	-0.3	89,151	1.5	2,368	231.7	3,881	NA	6,569	-25.3	461	-91.4
WA	143,177	13.2	127,430	28.5	11,528	384166	273	NA	3,725	-51.9	221	-98.9
WV	73,164	13.4	62,402	14.4	7,277	48.2	1,397	NA	2,088	-58.8	0	NA
WI	128,364	-1.4	105,191	4.2	15,578	-13.8	3,807	NA	3,785	-48.1	3	-99.9
WY	5,760	57.4	5,283	54	453	153.1	24	-52.9	0	NA	0	NA
US	6,723,931	4.3	5,539,803	-0.5	326,126	104.3	170,293	282.9	417,696	17	270,013	-14.6
PR	0	0	0	NA	0	NA	0	NA	0	NA	0	NA
VI	35	-65.3	9	-47.1	2	100	0	NA	21	-62.5	3	-88.9
TOTAL	6,723,966	4.3	5,539,812	-0.5	326,128	104.3	170,293	282.9	417,717	17	270,016	-14.6

* 1980 statistic was zero.

SOURCE: Health Care Financing Administration, Medicaid Statistics Branch, unpublished statistics, 1986.

Table 9

Medicaid Expenditures and Rates of Growth for Physician Services for Children FY 85 and Growth Since FY 1980

	EXPENDITURES AND PERCENTAGE GROWTH SINCE 1980											
			Cash		Non-Cash				Medically Needy			
	All Categories		AFDC Children		AFDC Children		Other XIX		AFDC Children		Other XIX	
	$	%	$	%	$	%	$	%	$	%	$	%
AL	$9,262,723	50.8	$8,287,122	35.3	$676,394	3448.6	$299,207	NA*	$0	NA	$0	NA
AK	3,779,589	562	1,845,622	254.6	0	-100	1,933,967	8340.8	0	NA	0	NA
AR	7,438,852	9.5	4,604,506	9.1	149,870	NA	187,798	NA	724,373	165.4	1,772,305	-22.9
CA	133,921,662	1.8	94,429,259	5.1	1,947,845	1393	0	NA	17,146,805	6.4	20,397,753	-19.9
CO	3,829,315	51.8	2,627,844	35.2	1,201,471	997.6	0	-100	0	NA	0	NA
CT	5,876,371	1.7	4,487,576	-14.7	195,135	NA	360,383	NA	292,703	-41.6	540,574	3406.1
DE	2,035,414	0.4	1,804,083	-1.3	50,286	-3.8	181,045	21.7	0	NA	0	NA
DC	5,310,744	26.4	3,990,635	5.4	192,650	1021.4	693,296	NA	409,812	3.3	24,351	818.2
FL	9,153,959	-2.6	8,375,631	-3.1	386,596	-48.7	391,732	NA	0	NA	0	NA
GA	14,777,209	47.6	13,081,524	45.7	1,504,848	86.4	106,746	-51.8	83,377	NA	714	NA
HI	5,604,886	0.5	4,904,076	46	682	-99.8	1	-100	581,779	40.8	118,348	-83
ID	1,916,442	26.8	1,619,459	17.9	169,501	294.7	127,482	34.4	0	NA	0	NA
IL	35,335,354	-12	32,040,794	-15.5	876,183	NA	591,323	NA	1,827,054	19	0	-100
IN	18,121,664	77795.7	15,637,323	74172.	2,481,921	112204	2,420	NA	0	NA	0	NA
IA	16,286,655	116.7	12,618,587	90.6	503,017	230	2,836,088	281.8	97,363	NA	231,600	NA
KS	6,434,144	-3.7	5,296,548	53.6	557,087	935.5	29,348	NA	423,153	-20.7	128,008	-95.2
KY	17,442,010	28.5	11,633,597	14.1	196,048	1062.1	0	NA	5,034,982	301.6	577,383	-72.6
LA	5,374,285	-48	5,335,130	-49.7	181,997	-24.6	173,486	NA	183,672	-1.7	0	-100
ME	4,416,393	-5.9	3,374,158	12.3	823,267	-16.6	0	-100	218,968	-57.4	0	NA
MD	12,433,022	66.2	10,334,644	68.5	112,071	NA	0	NA	1,575,285	16.7	411,022	NA
MA	11,726,734	-44.4	8,313,317	-53.6	292,390	NA	823,582	NA	676,231	-42.4	1,621,214	-18.1
MI	47,592,318	-6.5	38,956,771	-17.2	1,059,650	NA	0	NA	1,577,076	-48.8	5,998,821	710.2
MN	18,199,965	47.4	11,517,357	33.8	247,378	2391.7	14,411	NA	1,079,581	326.8	5,341,238	53.6
MS	8,987,690	17.5	7,661,599	13.1	1,266,019	52.4	60,080	44.7	0	NA	0	NA
MO	8,543,468	92.2	7,546,978	74.2	623,505	536.2	372,985	2476	0	NA	0	NA
MT	1,997,047	26.8	1,407,831	33.1	511,977	165.1	0	-100	77,239	NA	0	NA
NE	4,477,564	123.5	3,447,441	119.2	210,328	450.3	715,521	NA	49,144	-6.5	55,130	-83.8
NV	1,398,795	36.9	1,150,136	38	24,600	71	224,059	28.8	0	NA	0	NA
NH	,625,079	-27	499,617	-33.9	91,604	108.1	12,911	9	16,905	-61.7	4,042	1187.3
NJ	18,397,650	24.9	16,162,369	26.6	1,317,960	57.9	917,321	-18.6	0	NA	0	NA
NM	4,185,441	27.2	3,898,678	28.3	280,603	340.7	6,160	-96.7	0	NA	0	NA
NY	70,185,436	54.7	55,501,954	38.6	7,790	NA	4,848,477	NA	6,516,452	225.9	3,310,763	0.1
NC	10,420,467	36.3	7,564,694	23.1	1,142,015	136.5	491,257	NA	1,080,781	64.3	141,720	-60.6
ND	2,358,977	102.8	1,349,392	59.6	6,731	-12.2	1,452	NA	265,849	97.4	735,553	320
OH	40,549,658	113.8	39,792,865	115.3	747,388	53	9,405	NA	0	NA	0	NA
OK	15,616,828	116.1	6,346,260	66.2	4,532,725	37.9	599,069	NA	3,213,147	3004.8	925,627	4840.4
OR	4,449,330	-43	3,503,171	-30.5	379,206	359.6	388,284	-85.5	178,669	NA	0	NA
PA	22,040,052	8.8	15,136,108	-11.1	1,602,273	338	2,177,662	NA	2,874,305	113.5	249,704	-83.5
RI	1,854,662	-10	1,666,286	-11.3	60,435	NA	35,063	NA	92,878	-12	0	-100

Table 9 (continued)

Medicaid Expenditures and Rates of Growth for Physician Services for Children FY 85 and Growth Since FY 1980

	EXPENDITURES AND PERCENTAGE GROWTH SINCE 1980											
			Cash		Non-Cash				Medically Needy			
	All Categories		AFDC Children		AFDC Children		Other XIX		AFDC Children		Other XIX	
	$	%	$	%	$	%	$	%	$	%	$	%
SC	4,438,856	-27.1	3,536,324	-37.8	500,493	89.3	17,548	-87.1	384,491	NA	0	NA
SD	1,143,910	3	873,455	-14	68,503	213.1	201,952	177.6	0	NA	0	NA
TN	15,260,354	57.6	10,814,325	35.2	1,645,329	196.7	1,756,078	NA	1,044,622	77.3	0	-100
TX	33,020,043	55.6	30,192,868	47.7	1,867,407	142.1	559,420	NA	400,348	NA	0	NA
UT	4,082,208	96.3	2,423,393	74.1	742,738	714.2	0	NA	5,177	-88.7	910,900	65.6
VT	1,842,338	9.6	1,201,202	2.9	458,533	28.1	117,800	NA	63,881	62.3	922	-99.2
VA	9,727,728	2.5	8,104,704	1.5	253,543	391.2	548,186	NA	740,158	-0.6	81,137	-88.5
WA	17,502,173	34.3	15,677,209	70	1,178,803	100000+	56,346	NA	541,257	-14.9	48,558	-98.5
WV	4,766,117	138.1	4,082,086	143	411,495	150.5	174,021	NA	98,515	-37.6	0	NA
WI	13,048,393	4.5	11,143,463	17	1,149,437	-36.9	394,746	NA	360,539	-51.7	208	-99.9
WY	,645,912	75.7	608,348	77.1	34,597	116.7	2,967	-63.7	0	NA	0	NA
US	718,335,894	22.3	566,408,319	18.4	34,922,324	136.3	23,441,085	218.4	49,936,571	42.7	43,627,595	-15.6
PR	0	0	0	NA	0	NA	0	NA	0	NA	0	NA
VI	13,465	-47.9	2,870	-59.4	195	126.7	0	NA	9,850	-32.8	550	-86.5
ALL	718,349,359	22.3	566,411,189	18.4	34,922,519	136.3	23,441,085	218.4	49,946,421	42.7	43,628,145	-15.6

* 1980 statistic was zero.

SOURCE: Health Care Financing Administration, Medicaid Statistics Branch, unpublished statistics, 1986.

Table 10

Medicaid Recipients and Expenditures for Physician Services for Children
FY 85 and Growth Since FY 1980

	PER CAPITA EXPENDITURES AND PERCENTAGE GROWTH SINCE FY 1980											
			Cash		Non-Cash				Medically Needy			
	All Categories		AFDC Children		AFDC Children		Other XIX		AFDC Children		Other XIX	
	$	%	$	%	$	%	$	%	$	%	$	%
AL	108	36.7	104	31.5	202	83.2	108	NA*	NA	NA	NA	NA
AK	405	234.7	285	136.32	NA	NA	679	397.74	NA	NA	NA	NA
AR	131	20.2	111	28.68	173	NA	195	NA	143	22.24	210	0.5
CA	126	2.4	118	1.26	96	44.59	NA	NA	140	25.67	176	5.58
CO	116	41.5	109	42.32	134	143.44	NA	NA	NA	NA	NA	NA
CT	93	32.9	88	29.1	142	NA	151	NA	91	-22.36	97	491.12
DE	119	25.3	122	26.34	76	7.72	115	21.93	NA	NA	NA	NA
DC	153	34.2	138	23.44	185	122.77	290	NA	185	32.23	180	15.63
FL	57	-13.6	57	-12.02	40	-50.12	112	NA	NA	NA	NA	NA
GA	104	11.8	105	16.78	95	-25.88	103	-26.04	122	NA	179	NA
HI	135	-5.6	138	25.06	32	-90.88	1	-99.73	111	-6.58	151	-58.65
ID	138	39.4	129	32	194	144.47	260	96.03	NA	NA	NA	NA
IL	82	-4.7	80	-6.43	144	NA	100	NA	94	-18.04	NA	NA
IN	165	4.4	158	-15.37	229	251.75	81	NA	NA	NA	NA	NA
IA	174	62.6	167	59.76	100	50.14	255	58.08	154	NA	206	NA
KS	108	1.9	103	21.69	173	217.34	124	NA	96	-3.67	198	22.02
KY	114	11.8	114	16.33	53	1143.87	NA	NA	115	8.89	174	7.56
LA	85	-15.8	84	-17.76	85	43.67	105	NA	141	18.86	NA	NA
ME	95	3.3	96	16.55	90	-20.49	NA	NA	106	-19.91	NA	NA
MD	105	64.1	101	64.71	87	NA	NA	NA	131	63.41	131	NA
MA	92	19.5	89	25.9	71	NA	98	NA	79	-4.59	130	-79.56
MI	105	-9.5	106	-7.97	56	NA	NA	NA	82	-39.89	132	-10.75
MN	142	18.3	123	24.62	105	-30.11	146	NA	154	1.93	212	-12.8
MS	89	32.8	81	22.49	251	228.7	82	24.94	NA	NA	NA	NA
MO	90	50	88	46.65	93	-6.65	176	123.9	NA	NA	NA	NA
MT	124	31.9	118	46.67	138	50.56	NA	NA	160	NA	NA	NA
NE	130	31.3	123	37.52	86	56.02	188	NA	222	-42.91	345	81.44
NV	180	26.8	178	29.05	76	29.19	220	14.67	NA	NA	NA	NA
NH	60	-6.3	61	-3.62	53	-24.47	95	22.63	44	-29.49	808	3247.41
NJ	76	2.7	76	11.45	71	-17.11	90	-77.79	NA	NA	NA	NA
NM	141	33	138	27.02	197	159.04	220	143.47	NA	NA	NA	NA
NY	95	39.7	94	44.88	223	NA	104	NA	98	66.58	103	-50.53
NC	111	52.1	99	41.56	132	69.11	206	NA	167	97.45	253	147.24
ND	179	32.6	158	25.4	157	422.81	242	NA	175	-0.32	244	17.11
OH	102	39.7	104	39.32	53	29.69	90	NA	NA	NA	NA	NA
OK	223	87.4	130	56.47	388	64.71	787	NA	448	77.78	658	223.04
OR	94	-13.8	93	-5.97	90	27.59	102	-26.57	147	NA	NA	NA
PA	59	18	59	18.08	56	-0.09	67	NA	59	25.78	50	4.14
RI	62	8.8	60	9.15	195	NA	121	NA	79	8	NA	NA

Table 10 (continued)

Medicaid Recipients and Expenditures for Physician Services for Children FY 85 and Growth Since FY 1980

	PER CAPITA EXPENDITURES AND PERCENTAGE GROWTH SINCE FY 1980											
			Cash		Non-Cash				Medically Needy			
	All Categories		AFDC Children		AFDC Children		Other XIX		AFDC Children		Other XIX	
	$	%	$	%	$	%	$	%	$	%	$	%
SC	63	-24.1	68	-17.84	33	-54.82	112	-15.38	151	NA	NA	NA
SD	124	19.2	112	9.4	126	199.81	227	-53.79	NA	NA	NA	NA
TN	156	39.3	148	36.67	135	51.09	243	NA	204	44.89	NA	NA
TX	137	25.7	135	22.19	139	90.91	267	NA	225	NA	NA	NA
UT	124	45.9	107	49.09	131	126.13	NA	NA	225	182.6	195	1.96
VT	102	20	97	18.78	101	19.24	162	NA	141	45.08	49	-68.11
VA	95	3.3	91	0	107	48.11	141	NA	113	32.94	176	34.38
WA	122	18.4	123	32.29	102	219.56	206	NA	145	76.83	220	35.56
WV	65	109.7	65	112.33	57	68.96	125	NA	47	51.61	NA	NA
WI	102	6.3	106	12.32	74	-26.77	104	NA	95	-6.89	69	-33.77
WY	112	12	115	14.98	76	-14.36	124	-22.94	NA	NA	NA	NA
US	107	17.6	102	19.01	107	15.64	138	-16.83	120	22.01	162	-1.16
PR	0	0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
VI	385	50.4	319	-23.23	98	13.37	NA	NA	469	79.28	183	21.71
ALL	107	17.6	102	19.01	107	15.64	138	-16.83	120	22.01	162	-1.16

* 1980 statistic was zero.

SOURCE: Health Care Financing Administration, Medicaid Statistics Branch, unpublished statistics, 1986.

Table 11

Medicaid Recipients of Outpatient Hospital Services for Children
FY 85 AND GROWTH SINCE FY80

	NUMBER OF RECIPIENTS AND PERCENTAGE GROWTH SINCE FY 1980											
			Cash		Non-Cash				Medically Needy			
	All Categories		AFDC Children		AFDC Children		Other Title XIX		AFDC Children		Other Title XIX	
	#	%	#	%	#	%	#	%	#	%	#	%
AL	37284	-10.5	35,365	-14.9	1,068	917.1	851	NA*	0	NA	0	NA
AK	4065	86.3	2,974	48	0	-100	1,091	1436.6	0	NA	0	NA
AR	21882	-23.1	16,288	-29.7	325	NA	375	NA	1,814	103.1	3,080	-29.5
CA	581900	-6.2	432,360	-3.9	10,100	297.6	0	NA	68,620	-11.6	70,820	-21.2
CO	28417	-10.5	21,343	-16.3	7,074	77.9	0	-100	0	NA	0	NA
CT	60885	0.1	50,765	-10.4	1,069	NA	1,967	NA	2,494	-28.1	4,590	570.1
DE	10459	-22.2	9,136	-24	298	-19.2	1,025	-2.9	0	NA	0	NA
DC	25375	-27.5	21,213	-33.9	751	344.4	1,725	NA	1,581	-42	105	483.3
FL	53756	-36.6	49,648	-37.8	2,960	-39.9	1,148	NA	0	NA	0	NA
GA	86515	20.7	78,243	16.3	7,452	103.4	465	-36.3	354	NA	1	NA
HI	13529	-12.3	11,605	-6.6	0	-100	0	-100	1,530	35.4	394	-45.7
ID	6335	-16.8	5,719	-20	390	71.8	226	-5.8	0	NA	0	NA
IL	216083	5.9	199,798	2.8	3,687	NA	3,111	NA	9,487	52.5	0	-100
IN	61478	73969.9	56,026	82291.2	5,445	36200	7	NA	0	NA	0	NA
IA	45180	39.4	38,005	27.7	1,508	93.3	5,097	173.3	191	NA	379	NA
KS	23967	-22.2	20,835	0.9	1,332	147.1	76	NA	1,362	-40.4	362	-95.1
KY	77373	7.7	54,367	-6	1,369	-29.4	0	NA	20,335	286.6	1,302	-80.7
LA	71657	12.4	66,784	12.8	2,219	-2.6	1,408	NA	1,246	99.7	0	-100
ME	32052	-1.8	24,313	4.4	6,391	8.9	0	-100	1,348	-41.3	0	NA
MD	92439	-4.2	82,159	-4	759	NA	0	NA	7,396	-32.3	2,125	NA
MA	118492	-30	88,930	-43.6	3,199	NA	7,873	NA	7,031	-27.2	11,459	501.2
MI	206177	-8.1	171,268	-18	5,875	NA	0	NA	6,850	-46.5	22,184	777.9
MN	62839	26.2	47,701	11.6	865	3360	49	NA	2,625	278.8	11,599	82.9
MS	41334	-11.5	38,878	-8.4	2,140	-46.7	316	18.8	0	NA	0	NA
MO	70303	5.9	64,095	-2.1	4,436	481.4	1,772	936.3	0	NA	0	NA
MT	6917	7.3	5,211	1.2	1,543	106.3	0	-100	163	16200	0	NA
NE	15211	30.2	12,877	19.8	720	225.8	1,486	NA	82	64	46	-93.1
NV	4007	7.7	3,369	4.2	132	45.1	506	27.5	0	NA	0	NA
NH	4948	-32.5	4,024	-38	695	103.2	54	-43.2	171	-57.3	4	0
NJ	132847	9.4	116,239	0.7	9,813	115.6	6,795	388.5	0	NA	0	NA
NM	15827	9.2	15,152	11.4	661	111.9	14	-97.6	0	NA	0	NA
NY	567164	-15.7	451,085	-25.7	38	NA	42,074	NA	55,192	48.5	18,775	-34.7
NC	56910	-14.3	47,751	-16.2	4,638	32.2	1,173	NA	3,058	-26.3	290	-83.6
ND	4318	35.4	3,132	21.9	17	-80.2	2	NA	363	55.1	804	168
OH	287583	40	280,968	41.1	6,561	3.2	54	NA	0	NA	0	NA
OK	15242	48.6	10,635	23.3	3,064	96.8	171	NA	1,072	1431.4	300	7400
OR	25712	-32.3	21,014	-21.8	1,930	348.8	2,212	-79.3	556	NA	0	NA
PA	338154	7.7	241,583	-11.1	22,562	255.6	31,466	NA	38,833	460	3,710	-87.2
RI	18954	-3.6	17,959	-6.7	360	NA	296	NA	339	-13.3	0	-100

Table 11 (continued)

Medicaid Recipients of Outpatient Hospital Services for Children
FY 85 AND GROWTH SINCE FY80

	NUMBER OF RECIPIENTS AND PERCENTAGE GROWTH SINCE FY 1980											
			Cash		Non-Cash				Medically Needy			
	All Categories		AFDC Children		AFDC Children		Other Title XIX		AFDC Children		Other Title XIX	
	#	%	#	%	#	%	#	%	#	%	#	%
SC	40554	4.4	30,874	-16.4	6,663	357.6	76	-82.9	2,941	NA	0	NA
SD	4783	12	4,250	4.6	248	55	285	481.6	0	NA	0	NA
TN	56613	-7.2	43,864	-19.2	6,868	92	3,412	NA	2,469	15.3	0	-100
TX	94149	22.6	88,781	20.7	4,127	27.5	805	NA	436	NA	0	NA
UT	12398	18.3	9,059	5.1	1,747	236.6	0	NA	4	-98.1	1,588	40.9
VT	7135	-33.3	4,864	-37.2	1,754	-24.4	339	NA	166	-12.6	12	-97.3
VA	61857	-6.1	54,558	-6.3	1,363	260.6	2,048	NA	3,635	-21.7	253	-90.3
WA	68844	17.3	62,543	29	4,629	NA	137	NA	1,436	-50.2	99	-98.6
WV	28550	-21.1	25,071	-21	2,123	-7.4	841	NA	515	-76.2	0	NA
WI	89266	-1.6	77,606	3.2	8,443	-26.3	1,490	NA	1,726	-54.9	1	-99.6
WY	2190	57.4	2,024	53	158	203.8	8	-50	0	NA	0	NA
US	4009909	-1	3,322,311	-6.3	161,569	95.3	124,326	445.9	247,421	22.4	154,282	-22.4
PR	1023215	-3.1	181,842	136.7	200,024	58.3	41,147	NA	147,389	-26.4	452,813	-30.6
VI	9961	38	3,014	69.2	246	34.4	0	NA	5,066	38.9	1,635	1.9
ALL	5043085	-1.4	3,507,167	-3.2	361,839	72.9	165,473	626.6	399,876	-1.5	608,730	-28.6

* 1980 statistic was zero.

SOURCE: Health Care Financing Administration, Medicaid Statistics Branch, unpublished statistics, 1986.

Table 12

Medicaid Recipients of Outpatient Hospital Services for Children
FY 85 AND GROWTH SINCE FY80

	EXPENDITURES AND PERCENTAGE GROWTH SINCE FY 1980											
			Cash		Non-Cash				Medically Needy			
	All Categories		AFDC Children		AFDC Children		Other Title XIX		AFDC Children		Other Title XIX	
	$	%	$	%	$	%	$	%	$	%	$	%
AL	2973883	-15.3	2,814,227	-19.7	76,824	740.9	82,832	NA*	0	NA	0	NA
AK	1095177	278	727,113	170	0	-100	368,064	4607.3	0	NA	0	NA
AR	1195394	-42.8	843,333	-49.3	21,302	NA	27,628	NA	112,497	76.6	190,634	-47.7
CA	66714121	19.2	47,608,470	16.1	873,712	435.4	0	NA	8,207,385	24.7	10,024,554	22.2
CO	3736411	39.5	2,717,329	23.7	1,019,082	423.7	0	-100	0	NA	0	NA
CT	11245173	54.4	8,920,597	32.3	285,112	NA	644,719	NA	427,667	-16.2	967,078	3583.4
DE	1664116	42.7	1,462,080	39.7	42,578	47.1	159,458	75.7	0	NA	0	NA
DC	7249639	-1.2	5,929,344	-10.2	227,905	727	597,381	NA	462,968	-34.2	32,041	1417.8
FL	12148140	93.7	11,384,637	94	516,300	28	247,203	NA	0	NA	0	NA
GA	11332921	121.4	10,381,722	120	809,768	138.4	98,682	60.1	42,682	NA	67	NA
HI	1409067	-10.1	1,231,993	12.6	0	-100	0	-100	134,912	24.7	42,162	-67.2
ID	824331	29.6	735,980	24.8	49,358	165.6	38,993	39.5	0	NA	0	NA
IL	19086563	-2.3	17,721,875	-5	324,533	NA	290,903	NA	749,252	32.8	0	-100
IN	9172611	88293.7	8,293,494	87754.	878,820	93690.	297	NA	0	NA	0	NA
IA	5207874	131.8	4,256,991	109.9	158,287	261.6	720,520	312.4	23,800	NA	48,276	NA
KS	2901081	6.2	2,491,812	47.3	183,401	294.6	9,166	NA	173,898	-8.1	42,804	-94.7
KY	8703535	41.4	6,237,558	23.4	109,623	1805.5	0	NA	2,201,680	340.2	154,674	-73.9
LA	9248371	81.8	8,512,342	76.8	345,470	173.7	226,760	NA	163,799	212.6	0	-100
ME	3930602	47.1	3,025,492	65.8	737,428	46.3	0	-100	167,682	-25.9	0	NA
MD	20049618	50.9	17,812,660	50.2	141,419	NA	0	NA	1,510,391	5.7	585,148	NA
MA	42259934	71.5	30,341,565	39.4	849,271	NA	4,297,166	NA	2,171,841	52.8	4,600,091	215.9
MI	23945138	138.1	20,176,823	115.7	465,712	NA	0	NA	646,745	5.9	2,655,858	2777.4
MN	8021911	51	5,930,201	33.1	102,856	5204.6	3,130	NA	355,365	364.3	1,630,359	109.9
MS	3148904	38.5	2,939,180	42.5	175,701	-10.6	34,023	141.5	0	NA	0	NA
MO	8689613	35.8	7,906,441	25.6	545,496	525.9	237,676	1768.8	0	NA	0	NA
MT	720813	115.8	527,506	104.1	172,346	329.6	0	-100	20,961	161138	0	NA
NE	1482775	88.1	1,227,344	78.7	60,545	451.2	171,569	NA	14,307	305.8	9,010	-89.7
NV	511274	93.7	360,797	60.7	9,908	75.4	140,569	315.4	0	NA	0	NA
NH	786643	6.5	634,798	3.9	120,734	140	7,910	-24.1	22,171	-66.5	1,030	157.5
NJ	26165370	76.7	22,380,535	73.8	1,961,588	143.5	1,823,247	61.3	0	NA	0	NA
NM	1900948	70.2	1,806,774	76.2	86,198	357.7	7,976	-89	0	NA	0	NA
NY	141535810	41.4	113,553,556	29.3	6,573	NA	10,717,432	NA	13,401,123	192.7	3,857,126	-49.5
NC	5750067	25.7	4,712,314	19.5	491,650	108.2	159,987	NA	347,655	31.8	38,461	-70.8
ND	430672	54.5	369,956	65.6	1,946	39.8	398	NA	43,577	57.5	14,795	-43.6
OH	48110857	128.4	47,409,558	129.3	691,093	79.2	10,206	NA	0	NA	0	NA
OK	2746578	466.5	1,369,095	371.7	869,336	360	71,332	NA	348,304	6306.2	88,511	66953.
OR	3084775	9.3	2,426,374	36.9	198,433	691.3	383,342	-62.6	76,626	NA	0	NA
PA	21822396	61.7	16,264,683	43.2	1,160,061	390.5	2,085,967	NA	2,122,177	184.6	189,508	-83.6
RI	2940911	38.7	2,706,628	36.2	98,168	NA	80,856	NA	55,259	41.5	0	-100

Table 12 (continued)

Medicaid Recipients of Outpatient Hospital Services for Children
FY 85 AND GROWTH SINCE FY80

	EXPENDITURES AND PERCENTAGE GROWTH SINCE FY 1980											
			Cash		Non-Cash				Medically Needy			
	All Categories		AFDC Children		AFDC Children		Other Title XIX		AFDC Children		Other Title XIX	
	$	%	#	%	#	%	#	%	#	%	#	%
SC	2856451	5	2,367,379	-8.9	316,358	275.9	8,190	-77.7	164,524	NA	0	NA
SD	588918	42.2	510,773	28.4	27,380	328.6	50,765	407.5	0	NA	0	NA
TN	8256495	33.5	6,396,281	14.9	931,288	204.2	549,036	NA	379,890	88.7	0	-100
TX	10341451	126.5	9,722,683	120.9	437,245	166	124,350	NA	57,173	NA	0	NA
UT	1284029	81.3	881,557	56	190,809	505.4	0	NA	473	-96.4	211,190	114.9
VT	849351	5.4	556,347	-2.5	212,855	14.7	48,027	NA	30,231	145.6	1,891	-95
VA	8007791	16.1	6,983,894	13.9	152,433	309.8	320,377	NA	507,770	14.9	43,317	-84.7
WA	9132503	92.7	8,387,334	115.2	530,232	NA	18,564	NA	183,909	-8.2	12,464	-98.1
WV	964613	-17.4	840,744	-19.1	56,448	-13.6	53,498	NA	13,923	-78	0	NA
WI	13113214	41.5	11,508,094	48.8	1,030,118	-9.4	314,951	NA	259,938	-27	113	-99.7
WY	282465	110.7	262,462	104.9	18,737	351.6	1,266	-30.1	0	NA	0	NA
US	599621298	51.8	494,570,725	44.6	18,772,440	195.8	25,234,416	670.2	35,602,555	77.5	25,441,162	9.7
PR	62003983	24.1	9,339,764	792.1	9,428,941	61.9	1,939,526	NA	7,762,518	29.2	33,533,234	-9.6
VI	758892	209.3	252,246	311.1	23,484	273.5	0	NA	374,268	189.3	108,894	125.5
	662384173	48.8	504,162,735	46.9	28,224,865	131.8	27,173,942	729.4	43,739,341	67	59,083,290	-2.1

* 1980 statistic was zero.

SOURCE: Health Care Financing Administration, Medicaid Statistics Branch, unpublished statistics, 1986.

Table 13

Medicaid Per Recipient Expenditures for Hospital Outpatient Services for Children FY 85 and Growth Since FY 1980

	PER RECIPIENT EXPENDITURES AND PERCENTAGE GROWTH SINCE FY 1980											
			Cash		Non-Cash				Medically Needy			
	All Categories		AFDC Children		AFDC Children		Other XIX		AFDC Children		Other XIX	
	$	%	$	%	$	%	$	%	$	%	$	%
AL	80	-4.8	80	-5.6	72	-17.3	97	NA*	NA	NA	NA	NA
AK	269	102.3	244	82.4	NA	NA	337	206.3	NA	NA	NA	NA
AR	55	-25.7	52	-27.8	66	NA	74	NA	62	-13.1	62	-25.9
CA	115	27.8	110	20.8	87	34.7	NA	NA	120	41	142	55.1
CO	131	56	127	47.7	144	194.4	NA	NA	NA	NA	NA	NA
CT	185	54.2	176	47.6	267	NA	328	NA	171	16.6	211	449.7
DE	159	82.8	160	83.8	143	82.1	156	81	NA	NA	NA	NA
DC	286	36.2	280	35.9	303	86.1	346	NA	293	13.6	305	160.2
FL	226	205.4	229	211.9	174	113.1	215	NA	NA	NA	NA	NA
GA	131	84.5	133	89.2	109	17.2	212	151.4	121	NA	67	NA
HI	104	2	106	20.6	NA	NA	NA	NA	88	-7.9	107	-39.5
ID	130	54.8	129	55.9	127	54.6	173	48.1	NA	NA	NA	NA
IL	88	-8.3	89	-7.6	88	NA	94	NA	79	-12.9	NA	NA
IN	149	19.2	148	6.6	161	158.4	42	NA	NA	NA	NA	NA
IA	115	66.7	112	64.4	105	87	141	50.9	125	NA	127	NA
KS	121	36	120	46	138	59.7	121	NA	128	54.3	118	7.6
KY	112	30.2	115	31.3	80	2597.5	NA	NA	108	13.9	119	35.3
LA	129	61.3	127	56.8	156	181.1	161	NA	131	56.6	NA	NA
ME	123	50	124	58.8	115	34.3	NA	NA	124	26.2	NA	NA
MD	217	57.2	217	56.4	186	NA	NA	NA	204	56.2	275	NA
MA	357	144.5	341	147.1	265	NA	546	NA	309	109.8	401	-47.5
MI	116	157.8	118	163.2	79	NA	NA	NA	94	97.8	120	227.8
MN	128	19.6	124	19.2	119	53.3	64	NA	135	22.6	141	14.8
MS	76	55.1	76	55.5	82	67.9	108	103.3	NA	NA	NA	NA
MO	124	29.2	123	28.2	123	7.7	134	80.3	NA	NA	NA	NA
MT	104	100	101	101.7	112	108.2	NA	NA	129	889.2	NA	NA
NE	97	44.8	95	49.2	84	69.2	115	NA	174	147.4	196	50.1
NV	128	80.3	107	54.2	75	20.9	278	225.9	NA	NA	NA	NA
NH	159	57.4	158	67.5	174	18.1	146	33.6	130	-21.7	258	157.5
NJ	197	61.5	193	72.7	200	12.9	268	-67	NA	NA	NA	NA
NM	120	55.8	119	58.2	130	116	570	359.7	NA	NA	NA	NA
NY	250	67.8	252	73.8	173	NA	255	NA	243	97.1	205	-22.7
NC	101	46.4	99	42.7	106	57.5	136	NA	114	78.8	133	78.3
ND	100	14.9	118	35.9	114	607.2	199	NA	120	1.5	18	-78.9
OH	167	62.1	169	62.4	105	73.6	189	NA	NA	NA	NA	NA
OK	180	283	129	282.7	284	133.7	417	NA	325	318.3	295	794.1
OR	120	62.2	115	75.1	103	76.3	173	80.4	138	NA	NA	NA
PA	65	51.2	67	61.2	51	37.9	66	NA	55	-49.2	51	27.6
RI	155	43.5	151	46	273	NA	273	NA	163	63.2	NA	NA

Table 13 (continued)

Medicaid Per Recipient Expenditures for Hospital Outpatient Services for Children FY 85 and Growth Since FY 1980

	PER RECIPIENT EXPENDITURES AND PERCENTAGE GROWTH SINCE FY 1980											
			Cash		Non-Cash				Medically Needy			
	All Categories		AFDC Children		AFDC Children		Other XIX		AFDC Children		Other XIX	
	$	%	$	%	$	%	$	%	$	%	$	%
SC	70	0	77	9	47	-17.9	108	30.6	56	NA	NA	NA
SD	123	26.8	120	22.7	110	176.5	178	-12.7	NA	NA	NA	NA
TN	146	44.6	146	42.3	136	58.5	161	NA	154	63.7	NA	NA
TX	110	86.4	110	83.1	106	108.6	154	NA	131	NA	NA	NA
UT	104	52.9	97	48.5	109	79.8	NA	NA	118	89	133	52.5
VT	119	58.7	114	55.1	121	51.8	142	NA	182	181.1	158	84.4
VA	129	22.9	128	21.5	112	13.7	156	NA	140	46.9	171	58.1
WA	133	64.2	134	66.9	115	NA	136	NA	128	84.3	126	43.8
WV	34	6.3	34	2.4	27	-6.8	64	NA	27	-7.3	NA	NA
WI	147	44.1	148	44.2	122	23	211	NA	151	62	113	-20.6
WY	129	34.4	130	33.9	119	48.6	158	39.9	NA	NA	NA	NA
	NA	NA										
US	150	54.6	149	55.2	116	50.6	203	41	144	45.5	165	41
	NA	NA										
PR	61	29.8	51	264.3	47	2.2	47	NA	53	76.7	74	29.8
VI	76	123.5	94	147.1	95	179.4	NA	NA	74	111.4	67	123.3
	NA	NA										
Total	131	50.61	144	51.6	78	34.5	164	13.9	109	67.7	97	36.6

* 1980 statistic was zero.

SOURCE: Health Care Financing Administration, Medicaid Statistics Branch, unpublished statistics, 1986.

changes within individual States ranged from a decline of 63 percent in AFDC cash benefit recipients of physician in Massachusetts to an increase of 59 percent in those recipients in Nevada. The changes in the numbers of OPD recipients were not as extreme, but were strongly associated in sign with the physician changes.

With respect to the hypothesis on shifts in site of care in response to reduced real physician reimbursement rates, in only 6 States did the percentage increases in per recipient expenditures for physician services exceed the estimated-increase in physician prices. Hence, there were declines in real Medicaid expenditures for physician services in almost all States. The data, however, do not support the site shifting hypothesis. Both changes in numbers of recipients and changes in expenditures are correlated across services, while there is no inverse correlation between changes in per recipient expenditures for physician services and changes in per recipient expenditures for OPD services across the States. There are no obvious increases in OPD expenditures to match the decreases in physician expenditures.

CALIFORNIA DATA

The national data do pertain directly to children in the Medicaid programs, but there are no national data that relate to the specialties of the physicians that may be providing services to those children. Data from the State of California, however, were available to allow an examination of physician participation by pediatricians and obstetricians and the size of the potential patient population by broad age and gender categories. In addition, data are available from the American Medical Association (AMA) Masterfiles that can provide a partial examination of relative rates of Medicaid partici-

pation by pediatricians and OBGYNs in that State. Although some may allege that California is not representative of the country as a whole, California is one of the most substantial of the Medicaid programs. Further, in spite of the very varied pattern of changes in utilization and expenditures across the States during the 1980s, the California results are close to the national average.

Table 14 represents a synthesis of two sources of data relating to Medicaid children in California. The counts of recipients and expenditures derive from HCFA records were used to produce the earlier national analysis. Counts of eligibles come from July 1 annual estimates produced by the Department of Health Services in Sacramento. While each set of series appears to be consistent over time, estimates combining the two sources exhibit greater fluctuations than would be expected from either data set. Nonetheless, these data suggest that approximately 80-85 percent of all eligibles become recipients of service in any year. Expenditures per eligible appear to be declining; nominal expenditures per recipient of care declined from 1981-82 levels but have been fairly flat. This implies that real expenditures per recipient have been declining. Between 1980 and 1985 there was a 31 percent decline in both total real expenditures and real expenditures per user.[7]

Table 15 presents counts of physician practices that received Medicaid payments each year by county of practice for both OBGYNs and pediatricians. These are practice counts rather than physician counts; that is, a group practice is counted as a single practice even though it may

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7 Based on the physicians' services subcomponent of CPI.

Table 14

Medicaid Recipients and Expenditures for Physician Services for Children
California FY 80-FY 85

YEAR	KIDS.20[1]	RECIPIENTS	%USERS[2]	CURRENT DOLLAR EXPENDITURES			REAL EXPENDITURES[3]		
				TOTAL	$/KID	$/USER	TOTAL	$/KID	$/USER
1980		1071780		131580015		123	131580015		123
1981	1280229	1077180	84.1	144236849	113	134	129909644	102	121
1982	1267473	1103660	87.1	148838498	117	135	122538085	96	111
1983	1292714	1027060	79.4	126463451	98	123	96669337	75	94
1984	1304310	1090520	83.6	133321445	102	122	95285205	73	87
1985	1336088	1059980	79.3	133921662	100	126	90434061	68	85

1 Eligible counts of children aged 20 or under as of July 1 of the year.
2 Estimated recipients as a percentage of estimated eligibles.
3 Based upon the physicians' services subcomponent of the medical care component of the Consumer Price Index. [1980 set equal to 1.0.]

SOURCES: *Recipients, expenditures, and Consumer Price Index*--Health Care Financing Administration, unpublished statistics, 1986; *medicaid eligibles*--State of California, Department of Health Services, unpublished statistics, 1986.

Table 15

NUMBER OF PARTICIPATING MEDICAID PRACTICES BY SPECIALTY AND COUNTY
CALIFORNIA 1981-1985

	Pediatrics					OB-GYN				
	1981	1982	1983	1984	1985	1981	1982	1983	1984	1985
COUNTY										
California Total	1469	1577	1602	1569	1633	1867	1924	1793	1652	1719
Alameda	75	82	73	67	78	98	97	103	87	90
Alpine	0	0	0	0	0	0	0	0	0	0
Amador	0	1	1	2	1	0	0	0	0	0
Butte	9	10	7	7	7	11	13	14	14	12
Calaveras	0	0	0	0	0	0	0	0	0	0
Colusa	0	1	0	0	0	1	0	0	1	1
Contra Costa	30	31	34	35	35	41	39	31	32	31
Del Norte	0	1	1	1	1	0	0	0	0	1
El Dorado	3	3	4	4	2	7	7	7	5	8
Fresno	25	33	36	37	35	40	37	34	40	42
Glenn	1	0	0	0	0	1	1	1	1	1
Humboldt	9	10	8	9	10	5	6	6	6	9
Imperial	5	6	5	5	5	6	6	6	7	6
Inyo	3	2	1	1	1	0	1	1	1	0
Kern	18	17	12	14	16	18	20	21	25	27
Kings	2	2	1	2	2	3	3	4	3	3
Lake	1	1	2	2	3	0	0	0	0	0
Lassen	1	1	1	1	1	1	2	1	1	1
Los Angeles	455	495	510	523	537	650	670	620	551	554
Madera	2	2	3	3	3	3	4	4	4	4
Marin	14	12	12	10	10	11	12	12	10	10
Mariposa	0	0	0	0	0	0	0	0	0	0
Mendocina	5	3	3	6	3	7	9	9	7	6
Merced	4	4	4	4	4	4	4	4	5	6
Modoc	0	0	0	0	0	0	0	0	0	0
Mono	1	0	0	0	0	2	3	2	2	2
Monterey	12	14	12	11	14	14	16	7	8	18
Napa	4	3	3	3	4	8	6	6	9	8
Nevada	5	6	6	6	5	8	8	7	8	11
Orange	150	150	148	137	144	167	186	156	138	151
Placer	10	10	10	8	9	9	10	10	12	12
Plumas	1	1	1	1	1	0	0	0	0	0
Riverside	27	41	42	30	32	40	42	37	41	42

Table 15

NUMBER OF PARTICIPATING MEDICAID PRACTICES BY SPECIALTY AND COUNTY
CALIFORNIA 1981-1985

	Pediatrics					OB-GYN				
	1981	1982	1983	1984	1985	1981	1982	1983	1984	1985
Sacramento	35	39	44	43	50	61	64	66	62	63
San Benito	2	2	2	2	2	1	1	1	1	2
San Bernardino	66	69	78	76	80	47	50	44	45	53
San Diego	125	122	126	129	134	147	147	152	133	141
San Francisco	101	112	109	100	109	98	104	92	91	88
San Joaquin	20	24	24	23	26	27	32	35	32	36
San Luis Obispo	14	9	7	7	10	10	9	9	9	9
San Mateo	31	32	33	33	31	41	35	28	27	23
Santa Barbara	16	18	18	15	15	28	25	25	15	16
Santa Clara	96	100	109	106	107	110	113	105	92	102
Santa Cruz	11	12	12	12	10	16	15	14	12	13
Shasta	6	5	6	7	7	9	9	12	11	10
Sierra	0	0	0	0	0	0	0	0	0	0
Siskiyou	1	1	0	0	0	1	1	0	0	0
Solano	10	13	13	9	10	8	7	5	6	7
Sonoma	15	18	18	17	18	27	27	26	28	26
Stanislaus	11	14	16	16	16	17	18	19	17	16
Sutter	0	0	0	0	0	4	6	5	5	6
Tehama	0	1	1	1	1	0	0	0	0	0
Trinity	0	0	0	0	0	0	0	0	0	0
Tulare	8	12	13	11	11	12	14	14	13	12
Tuoluane	2	3	2	2	2	3	3	2	2	2
Ventura	24	26	28	28	28	41	38	32	29	34
Yolo	2	2	3	3	3	4	4	3	3	3
Yuba	1	1	0	0	0	0	0	1	1	1

SOURCE: State of California, Department of Health Services, Medical Care Statistics Unit, unpublished statistics, 1986.

represent several physicians.[8] For pediatricians there were increases in participating practices each year between 1981 and 1985 with the exception of 1984. For OBGYNs, however, there were substantial declines in participating practices in both 1983 and 1984. Although many counties experienced slight declines in the number of participating OBGYN practices in those years, the declines were particularly severe in Los Angeles and Orange counties. There were 272 fewer participating OBGYN practices in California in 1984 compared to 1982; the losses in Los Angeles and Orange counties were 119 and 48, respectively. Although the number of participating practices declined absolutely in some counties, the numbers of participating practices in each county in both specialties were generally stable across this time period. For pediatricians between 1980 and 1985, in only 19 of 58 counties was there a net change of more than three practices participating in Medicaid. For OBGYNs, this occurred in only 15 counties.

From time to time the California Medical Association (CMA) receives printouts from AMA Masterfile with very disaggregated data on physicians by county and specialty. Data from such printouts were available for two of the five years represented by the California Department of Health Services data on participating practices. Table 16 presents estimated participation rates for 1981-1983 based on the CMA data, with the 1982 estimates based on interpolations of physician counts from 1981 and 1983. Because the CMA data are counts of doctors and the Department of Health Services data are counts of practices,

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8 Because those group practices are more likely to be located in the more urban counties of the state, care must be exercised when trying to estimate participation rates by county.

Table 16

ESTIMATED PARTICIPATION RATES IN CALIFORNIA 1981-1983[1]

	OBGYN			Pediatrics		
COUNTY	1981	1982	1983	1981	1982	1983
TOTAL	67.1	66	58.8	51.7	52.7	51.1
Alameda	68.5	63.8	64.4	37.7	39.6	34
Alpine	NA[2]	NA	NA	NA	NA	NA
Amador	0	0	0	NA	100	100
Butte	78.6	86.7	87.5	75	83.3	63.6
Calaveras	NA	NA	NA	NA	0	0
Colusa	NA	0	0	NA	NA	NA
Contra Co	54.7	50.0	38.3	34.9	34.1	35.8
Del Norte	NA	NA	NA	NA	100	100
El Dorado	NA	175.0	87.5	NA	150	100
Fresno	88.9	74.0	63.0	40.3	50.8	52.9
Glenn	50.0	50.0	50.0	NA	NA	NA
Humboldt	55.6	75.0	85.7	75.0	90.9	88.9
Imperial	66.7	60.0	60.0	100.0	120.0	100.0
Inyo	NA	100.0	50.0	300.0	200.0	100.0
Kern	56.3	54.1	51.2	51.4	47.2	33.3
Kings	75.0	60.0	66.7	200.0	200.0	100.0
Lake	NA	NA	NA	NA	NA	NA
Lassen	50.0	200.0	NA	33.3	50.0	100.0
Los Angeles	66.2	66.0	59.2	48.6	50.3	49.4
Madera	150.0	133.3	133.3	50.0	40.0	50.0
Marin	35.5	35.3	33.3	35.0	29.3	28.6
Mariposa	NA	NA	NA	NA	NA	NA
Mendocino	77.8	100.0	112.5	62.5	33.3	30.0
Merced	44.4	40.0	40.0	57.1	44.4	40.0
Modoc	NA	NA	NA	NA	NA	NA
Mono	NA	NA	NA	NA	NA	NA
Monterey	53.8	59.3	25.0	52.2	58.3	48.0
Napa	133.3	75.0	60.0	33.3	25.0	27.3
Nevada	114.3	114.3	116.7	166.7	150.0	120.0
Orange	69.0	70.5	54.5	57.3	55.1	52.7
Placer	52.9	55.6	55.6	58.8	47.6	41.7
Plumas	NA	NA	NA	100.0	100.0	100.0
Riverside	72.7	71.2	58.7	87.1	120.6	113.5

Table 16 (continued)

ESTIMATED PARTICIPATION RATES IN CALIFORNIA 1981-1983

	------OBGYN----------			-----Pediatrics-------		
	1981	1982	1983	1981	1982	1983
Sacramento	65.6	66.0	65.3	39.8	40.2	41.5
San Benito	100.0	100.0	100.0	100.0	100.0	100.0
San Bernadino	53.4	53.8	45.4	68.8	69.7	76.5
San Diego	69.7	66.8	66.7	65.4	59.8	58.3
San Francisco	73.1	76.5	67.2	59.4	64.4	61.6
San Joaquin	75.0	84.2	89.7	95.2	92.3	80.0
San Luis Obispo	66.7	64.3	69.2	116.7	75.0	58.3
San Mateo	58.6	47.3	35.9	39.2	37.6	36.3
Santa Barbara	65.1	56.8	55.6	59.3	64.3	62.1
Santa Clara	57.0	55.9	50.0	46.6	46.7	49.3
Santa Cruz	88.9	75.0	66.7	64.7	66.7	66.7
Shasta	90.0	81.8	109.1	75.0	55.6	66.7
Sierra	NA	NA	NA	NA	NA	NA
Siskiyou	100.0	100.0	NA	50.0	50.0	0
Solano	72.7	58.3	38.5	50.0	59.1	54.2
Sonoma	93.1	90.0	83.9	55.6	58.1	52.9
Stanislaus	63.0	62.1	61.3	55.0	66.7	76.2
Sutter	66.7	100.0	100.0	NA	0	0
Tehama	NA	NA	NA	NA	100.0	100.0
Trinity	NA	NA	NA	NA	NA	NA
Tulare	85.7	93.3	87.5	29.6	42.9	44.8
Tuolumne	100.0	100.0	66.7	66.7	75.0	50.0
Ventura	91.1	79.2	62.7	45.3	45.6	46.7
Yolo	44.4	40.0	30.0	25.0	20.0	27.3
Yuba	0	0	20.0	16.7	16.7	0

1 Number of practices receiving Medicaid payments by county of practice divided by the number of physicians by county of residence.

* No physicians in the relevent specialty are listed as practicing in that county.

SOURCES: *number of practices*--State of California, Department of Health Services, Medical Care Statistics Unit, unpublished statistics, 1986; *number of physicians*--California Medical Association, unpublished statistics from the American Medical Association Master File, 1986.

the estimates in Table 16 may be very gross. Comparisons between any two counties in any one year may be unreliable, although changes in rates over time in any one county are likely to be more accurate. Taking this into account, the tables exhibits two patterns. First, participation rates do appear to vary across the State, with generally lower participation rates in the more urban counties. This is likely to be due to a relatively greater number of group practices in those counties.[9]

Second, the overall participation rates for the two specialties match the pattern in the number of participating practices. In particular, the estimated OBGYN participation rate declines markedly in 1983. The percentage drop in participation rates in both Los Angeles and Orange counties matches exactly with the percentage drop in participating practices.

Finally, one can indirectly estimate the impact of these fluctuations in participation rates on beneficiary access to care. Tables 17 and 18 are based on eligible counts by county, age, and gender. For the purpose of the exercise, all eligible children age 20 or younger are considered potential patients of pediatricians. Females aged 15 to 44 are considered potential patients of OBGYNs. Each county can then be assessed in terms of the number of participating practices per thousand eligibles.

For pediatricians, the picture is one of stability despite the estimated reductions in real reimbursement rates from the Medicaid program. From 1981 to 1985 the statewide average of pediatric practices per thousand

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9 In addition, some more rural counties exhibit participation rates greater than 100 percent. This is likely to be due to differences in the two data sets, one being based on county of practice while the other is based upon county of residence.

Table 17

PHYSICIAN PRACTICES RECEIVING MEDICAID PAYMENTS
PER THOUSAND ELIGIBLES--CALIFORNIA 1981-1985

PEDIATRICIAN PRACTICES PER CHILD 20 YEARS OR YOUNGER

COUNTY	1981	1982	1983	1984	1985
California Total	1.15	1.24	1.24	1.2	1.22
Alameda	1.3	1.4	1.2	1.1	1.4
Alpine	0	0	0	0	0
Amador	0	1.3	1.3	2.6	1.3
Butte	1.1	1.1	0.7	0.7	0.7
Calaveras	0	0	0	0	0
Colusa	0	1.5	0	0	0
Contra Costa	1.1	1.2	1.4	1.4	1.5
Del Norte	0	0.5	0.6	0.5	0.5
El Dorado	0.8	0.8	1	1.1	0.5
Fresno	0.6	0.7	0.6	0.6	0.5
Glenn	1	0	0	0	0
Humboldt	1.3	1.4	1.1	1.2	1.2
Imperial	0.6	0.8	0.6	0.6	0.5
Inyo	3.5	2.4	1.1	1	0.6
Kern	0.8	0.7	0.5	0.5	0.5
Kings	0.3	0.3	0.1	0.3	0.3
Lake	0.3	0.3	0.6	0.6	0.9
Lassen	0.8	0.6	0.6	0.6	0.6
Los Angeles	1	1.2	1.3	1.3	1.3
Madera	0.4	0.3	0.3	0.5	0.4
Marin	3.8	3.4	3.9	3.2	3.3
Mariposa	0	0	0	0	0
Mendocina	1	0.5	0.6	1.1	0.5
Merced	0.3	0.3	0.3	0.2	0.2
Modoc	0	0	0	0	0
Mono	5.6	0	0	0	0
Monterey	0.8	1	0.9	0.8	1
Napa	1.2	0.9	0.9	0.9	1.2
Nevada	2.3	2.3	2.2	2.1	1.8
Orange	3	2.9	2.9	2.7	2.9
Placer	1.8	1.8	1.8	1.5	1.7
Plumas	1.2	1	1.1	1.1	1
Riverside	0.6	0.8	0.9	0.6	0.7

Table 17 (continued)

PHYSICIAN PRACTICES RECEIVING MEDICAID PAYMENTS
PER THOUSAND ELIGIBLES--CALIFORNIA 1981-1985

PEDIATRICIAN PRACTICES PER CHILD 20 YEARS OR YOUNGER

COUNTY	1981	1982	1983	1984	1985
Sacramento	0.5	0.6	0.6	0.6	0.7
San Benito	1.2	1.1	1.1	1	1
San Bernardino	1.1	1.1	1.2	1.1	1.1
San Diego	1.5	1.4	1.4	1.4	1.5
San Francisco	2.9	3.3	3.2	3.2	3.6
San Joaquin	0.6	0.6	0.6	0.5	0.6
San Luis Obispo	2.5	1.8	1.3	1.3	1.9
San Mateo	2.5	2.9	3	3.3	3.3
Santa Barbara	1.5	1.6	1.7	1.5	1.5
Santa Clara	2	2	2.2	2.2	2.3
Santa Cruz	1.6	1.8	1.7	1.7	1.4
Shasta	0.6	0.5	0.6	0.7	0.6
Sierra	0	0	0	0	0
Siskiyou	0.5	0.4	0	0	0
Solano	0.8	1.3	1.1	0.8	0.8
Sonoma	1.1	1.4	1.4	1.4	1.5
Stanislaus	0.5	0.7	0.7	0.7	0.6
Sutter	0	0	0	0	0
Tehama	0	0.4	0.3	0.3	0.3
Trinity	0	0	0	0	0
Tulare	0.3	0.4	0.5	0.4	0.3
Tuoluane	1	1.5	0.9	0.9	0.9
Ventura	1.1	1.2	1.3	1.4	1.5
Yolo	0.3	0.3	0.6	0.4	0.4
Yuba	0.2	0.2	0	0	0

SOURCE: State of California, Department of Health Care Services, Medical Care Statistics Unit, unpublished statistics, 1986.

Table 18

PHYSICIAN PRACTICES RECEIVING MEDICAID PAYMENTS
PER THOUSAND ELIGIBLES--CALIFORNIA 1981-1985

OBGYN PRACTICES PER FEMALE ELIGIBLE AGED 15 TO 44

COUNTY	1981	1982	1983	1984	1985
California Total	2.73	2.86	2.92	2.71	2.8
Alameda	2.8	2.8	3.3	2.8	3
Alpine	0	0	0	0	0
Amador	0	0	0	0	0
Butte	2.2	2.5	2.8	2.6	2.1
Calaveras	0	0	0	0	0
Colusa	2.9	0	0	2.5	2.5
Contra Costa	2.6	2.5	2.3	2.4	2.5
Del Norte	0	0	0	0	1
El Dorado	3.1	2.9	3.2	2.5	3.7
Fresno	1.9	1.6	1.4	1.6	1.6
Glenn	2	1.8	1.8	1.6	1.4
Humboldt	1.1	1.3	1.5	1.5	2
Imperial	1.7	1.7	1.8	1.9	1.5
Inyo	0	2.2	2.2	2	0
Kern	1.6	1.7	1.7	2	2
Kings	1	1	1.4	1	1
Lake	0	0	0	0	0
Lassen	1.3	2	1.2	1.1	1.1
Los Angeles	2.9	3.3	3.5	3.1	3.1
Madera	1.1	1.4	1.5	1.5	1.4
Marin	3.5	4.1	5.9	4.9	4.9
Mariposa	0	0	0	0	0
Mendocina	2.2	2.7	3.2	2.4	2
Merced	0.7	0.6	0.6	0.7	0.8
Modoc	0	0	0	0	0
Mono	17.2	25	20.2	21.5	20.4
Monterey	1.8	2.3	1.1	1.3	2.8
Napa	3.6	2.8	3.1	4.8	4.4
Nevada	5.6	4.8	4.6	5.1	7.2
Orange	6.2	6.8	6.5	5.9	6.8
Placer	2.6	2.9	3.2	3.9	4
Plumas	0	0	0	0	0
Riverside	1.7	1.7	1.6	1.9	2

Table 18 (continued)

PHYSICIAN PRACTICES RECEIVING MEDICAID PAYMENTS
PER THOUSAND ELIGIBLES--CALIFORNIA 1981-1985

OBGYN PRACTICES PER FEMALE ELIGIBLE AGED 15 TO 44

COUNTY	1981	1982	1983	1984	1985
Sacramento	1.6	1.7	1.9	1.7	1.7
San Benito	1.3	1.3	1.3	1.2	2.5
San Bernardino	1.5	1.5	1.4	1.4	1.6
San Diego	3.2	3.2	3.4	3.1	3.2
San Francisco	4.5	4.8	5.2	5.6	5.6
San Joaquin	1.6	1.7	1.9	1.7	1.8
San Luis Obispo	2.8	2.8	3.1	3.2	3.2
San Mateo	5.6	5.3	4.6	5.1	4.7
Santa Barbara	4.5	4	4.5	3	3.3
Santa Clara	4.4	4.5	4.5	4.1	4.8
Santa Cruz	3.4	3.2	3.5	3	3.3
Shasta	1.7	1.5	2.3	2	1.7
Sierra	0	0	0	0	0
Siskiyou	0.9	0.7	0	0	0
Solano	1.2	1.2	0.8	1	1.1
Sonoma	3	3.1	3.4	3.8	3.7
Stanislaus	1.5	1.6	1.7	1.5	1.3
Sutter	2	3.1	2.6	2.5	2.9
Tehama	0	0	0	0	0
Trinity	0	0	0	0	0
Tulare	0.9	1.1	1.2	1.1	0.9
Tuoluane	2.7	2.5	1.7	1.7	1.7
Ventura	3.6	3.3	3.2	3.1	4.2
Yolo	1.1	1.1	0.6	0.9	0.9
Yuba	0	0	0.4	0.3	0.3

SOURCE: State of California, Department of Health Care Services, Medical Care Statistics Unit, unpublished statistics, 1986.

eligibles increased from 1.15 to 1.22. Most counties had stable rates over this time. For the obstetric practices, the pattern is somewhat different, but not as dramatic as might be expected given the decline in participating practices. In fact, while between 1982 and 1983 Los Angeles experienced a decline of 7 percent in the number of participating OBGYN practices, the practices per thousand eligibles ratio increased by 6 percent. Overall, the rate per thousand eligibles in California increased from 2.73 in 1981 to 2.8 in 1985. There was a decline in this rate in 1984, but the rate increased in 1983 in spite of the withdrawal of 7 percent of the State's OBGYN practices that had participated in the preceeding year.

CONCLUSION

There have been few striking conclusions in this exercise. The one definite result from the data analysis is that real physician services provided to children through the Medicaid programs have been declining, and that result can be observed in most of the States. The degree of hardship that this may have produced on those children and their families is uncertain. There has not been a corresponding increase in hospital users among children either in the inpatient or outpatient settings. Outpatient and inpatient hospital service expenditures have both increased in nominal terms, but declined in real terms.

In spite of the apparent reduction in real reimbursement rates, physician participation rates (in California) have been relatively stable. Both estimated proportions of physicians participating in the program and ratios of participating practices per one thousand eligible Medicaid children were virtually unchanged during the first half of the 1980s. This is con-

sistent with the relatively high and stable participation rates reported by pediatricians in telephone surveys. Although one might still expect some overstatement of Medicaid participation by physicians, a forty percent overstatement seems exaggerated. Unfortunately, completely resolving the reported discrepancy must await a future survey.

The results of cross section studies of physician participation in the Medicaid programs tend to be consistent with the above findings. Participation rates at any point in time appear to be enhanced by higher Medicaid payment rates, depressed by relatively high private market fees and by relatively high costs of practice. The statistics over several years suggest that the supply of physician services to the Medicaid programs may appear to be less price elastic in the long run than in the short run. Such a paradox may occur because certain physician practices continue to participate substantially in the Medicaid programs despite low and declining real payment rates, while other practices participate on an occasional basis or not at all. This may be due to the existance of practices that treat large numbers of Medicaid patients year after year. Alternatively, some practices in relatively underserved areas may continue to treat Medicaid patients almost regardless of price.

Rising costs of professional liability insurance are alleged to be a particular problem for OBGYNs. They pay relatively higher premiums than many of their colleagues, and those premiums represent a relatively greater proportion of their gross professional revenues. However, on average OBGYNs do not pay the highest rates nor the greatest relative shares (Paxton, 1986). Further, their professional liability insurance rates are not increasing faster than those of other physicians (Dutton, 1982). OBGYNs may simply face a

choice not available to most other physicians in that they can focus their practice away from obstetrics and be rewarded with a lower malpractice premium. A survey in California suggests that both OBGYNs and general and family practitioners that had performed deliveries have made this choice (Hough and Jones, 1985). This survey also suggests that primarily physicians with relatively low volumes of deliveries had left obstetrics. This suggests that State insurance commissioners might want to investigate the possibility of "pay as you go" malpractice premiums for OBGYNs performing deliveries. The current system of a flat rate regardless of volume will discourage performance of deliveries by both young OBGYNs and older OBGNYs approaching retirement. These physicians are likely to have below average patient loads, yet may be required to pay no less than average malpractice premiums for their specialty.

Although malpractice worries may have led to a decline in Medicaid participation by OBGYNs in California in 1983 and 1984, the number of participating practices available to eligible women of child bearing age was more stable. Further, between 1984 and 1985 the ratio of participating practices to eligibles increased. Unfortunately, HCFA central office data do not reveal whether those practices will accept new Medicaid eligibles that are not already patients of those practices. There do exist data at the State level that might be of use in analyzing the extent of participation, and the reports mandated under the Omnibus Budget Reconciliation Act of 1986 may lead to a

more refined system of reporting and using these data.[10] The telephone survey data, even if overstated has been consistent in showing the skewedness in patterns of participation. Those patterns do suggest an unevenness in Medicaid patients' access to care across the spectrum of physicians in the United States.

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10 Section 9432 of the Act calls for a report to Congress on high volume or high cost procedures, their payment rates, the rate at which they are performed on Medicaid patients (compared to other similarly aged non-Medicaid populations, if possible), and the number of board certified or board eligible physicians who provide care to Medicaid patients and perform those procedures. This section also calls for a study of the utilization of selected medical treatments and surgical procedures by Medicaid beneficiaries in order to assess the appropriateness, necessity, and effectiveness of such treatments. Further, the study shall analyze the extent to which there is significant variation in the rate of utilization of these treatments for different geographic areas within States and among States.

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